

GRAIN & FEED JOURNALS

CONSOLIDATED

A Merger of Grain Dealers Journal, American Elevator & Grain Trade, Grain World and Price Current-Grain Reporter

In This Number

Fire Losses for 33 Years

Purdue Holds Grain Grading School

National Scale Men Modify Scale Specifications

Sealed Corn in Bad Condition

Electrical Extermination of Grain Insects

Automatic Weighing of Material

Grease Lubrication

Excessive Lease Charges

Seed Corn Situation Bad

Grasses for the Great Plains

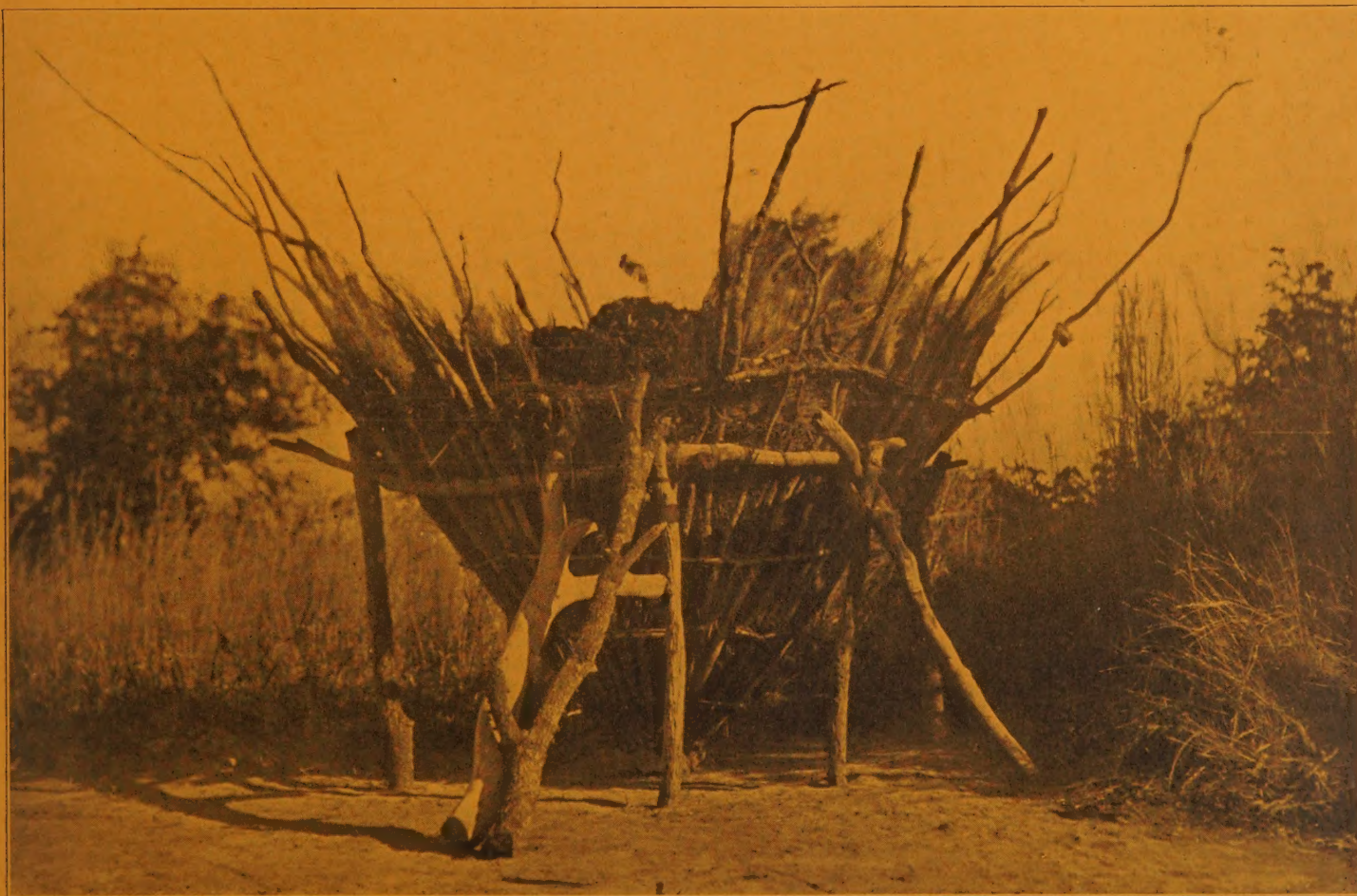
Corn Ear Rot in 1934 Crop

Chicken Thrives in Glass Bottle

Dry Milk Shortage

Condensed Whey for Coccidiosis

Soy Bean Extraction Process



A West African Grain Drier of the Latest Improved Design
[See page 219]

Directory of the Grain Trade

In Organized Markets Only Members of the Local Grain Exchange Will Be Listed

HAVING YOUR name in this directory will introduce you to many old and new firms during the year, whom you do not know or could not meet in any other way. Many new concerns are looking for connections, seeking an outlet or an inlet, possibly in your territory. It is certain that they turn to this recognized Directory, and act upon the suggestions it gives them. The cost is only \$10 per year.

AMARILLO, TEXAS

Grain Exchange Members

J. N. Beasley Elevator Co., Inc., grain and seeds.*
Burris Panhandle Elevators, public storage-ndsing.
Great West Mill & Elevator Co., millers, grain dealers.
Henneman Grain & Seed Co., seeds and grain.*
Kearns Grain & Seed Co., grain-field seeds.*
Martin-Lane Grain Co., wholesale grain.*
Stone, Lester, grain merchant.

BALTIMORE, MD.

Chamber of Commerce Members

Beer & Co., Inc., E. H., grain, hay, seeds.*

BUFFALO, N. Y.

Corn Exchange Members

American Elvtr. & Grain Div., recrs., shprs., consmts.*
Cargill Grain Co., grain merchants.
Lewis Grain Corporation, consignments.
McKillen, Inc., J. G., consignments.
Provoost, S. E., grain and feed broker.*
Wood Grain Corp., consignments, brokerage.*

BURLINGTON, IOWA.

Member Chicago Board of Trade

Bartlett-Frazier Co., grain merchants.*

CAIRO, ILL.

Board of Trade Members

Thistlewood & Co., grain and hay.*

CEDAR RAPIDS, IOWA

North Iowa Grain Co., country run grain.*
Piper Grain & Mfg. Co., receivers and shippers.*
Wildner Grain Co., grain merchants.*

CHICAGO, ILL.

Board of Trade Members

Bailey & Co., E. W., grain commission merchants.*
Bennett & Co., Jas. E., grain, provisions, stocks.*
Bartlett-Frazier Co., grain merchants.*
Carhart-Code-Harwood Co., grain commission.
Dole & Co., J. H., recvrs.-comm. mchts.*
Feehery & Co., E. J., consignments, grain to arr.*
Harris, Burrows & Hicks, grain & prov., futures.*
Holt & Co., Lowell, commission, grain and seeds.
Lamson Bros. & Co., grain, stocks, provisions.*
Norris Grain Co., grain merchants.*
Quaker Oats Co., grain merchants.*
Stratton Grain Co., grain merchants.*

CLEVELAND, OHIO

Bailey, E. I., shpr. grain, mill'd. oil and c.s. meal.*

COLUMBUS, OHIO

Dill Grain Co., L. J., shippers grain-feed.

DALLAS, TEXAS

Crouch Grain Co., J. C., buyers wheat, corn, oats.*
Doggett Grain Co., sudan, kafir, milo, wht., corn, oats.

DECATUR, ILL.

Baldwin Elevator Co., grain merchants.*
Evans Elevator Co., grain, Chicago B. of T. Members.*
Hight Elevator Co., grain merchants.*

DES MOINES, IOWA

Des Moines Elvtr. & Grain Co., grain merchants.*

ENID, OKLA.

Board of Trade Members

Enid Terminal Elev. Co., pub. storage gr. mchts.*
Feuquay Grain Co., optrs. country elvtrs., gr. mdsg.*
General Grain Co., term. elvtr., gr. merchants.
Johnston, W. B., wheat, coarse grains, field seeds.*
Salina Terminal Elvtr., optrs. Southwest Term. Elvtr.
Union Equity Co-operative Exchange L. D. 66 & 67.

*Members Grain & Feed Dealers National Assn.

FORT DODGE, IOWA

Bulpitt Grain Co., grain merchants.*
Christensen Grain Co., grain merchants.*
Davis Bros. & Potter, grain shippers.*

FORT WORTH, TEXAS

Grain and Cotton Exchange Members

Bennett & Co., Jas. E., grain, stocks, provisions.
Brackett Grain Co., brokerage, consignments.*
Carter Grain Co., C. M., brokerage and consignments.*
Ft. Worth Elvts. & Whsg. Co., consignments, stge.
Gwynne-Little Grain Co., brokerage, consignments.
Lone Star Elevators, public storage-merchandising.
Rogers Co., E. M., brokerage and consignments.*
Smith-Ingraham Grain Co., domestic-export grain.
Strader, Ralph, brokerage, consgnts., merchants.
Transit Gr. & Comm. Co., consignments-brokerage.*
Worth Gr. & Comm. Co. (Sam Strader & Harry Johnson)*

GALVESTON, TEXAS

Shaw, Thomas F., grain exporter.*

GREENVILLE, OHIO

Hall Grain Co., The, wholesale grain.

HUTCHINSON, KAN.

Smoot Grain Co., oper. Grain Belt Elevator.*

INDIANAPOLIS, IND.

Board of Trade Members

Cleveland Grain Co., grain commission.*

IOLA, KANSAS

Cox, Roy W. grain, hay, mill feed.

KANSAS CITY, MO.

Board of Trade Members

Christopher & Co., B. C., cash and options.*
Davis-Noland-Merrill Grain Co., grain mchts.*
Kansas Elevator Co., mlg. wheat specialists.*
Meservey-O'Sullivan Grain Co., gr. mchts. congnts.*
Moore-Seaver Grain Co., grain receivers.*
Sculard-Bishop Grain Co., consignments.*
Simonds-Shields-Lonsdale Grain Co., gr. mchts.*
Wolcott & Lincoln, Inc., consignments.*

LANSING, MICH.

Lansing Grain Co., Rosen Rye, soft wheat, etc.*
Michigan Elevator Exchange, Mich. grain & beans.*

LOUISVILLE, KY.

Board of Trade Members

Zorn & Co., S., receivers and shippers.*

MARYSVILLE, OHIO

Scott & Sons, O. M., soy beans.

MEMPHIS, TENN.

Merchants Exchange Members

Buxton, E. E., broker and commission merchant.*

MILWAUKEE, WIS.

Grain & Stock Exchange

Stratton Grain Co., grain merchants.*

MINNEAPOLIS, MINN.

Chamber of Commerce Members

Runge Elevator Corp., grain merchants.
Cargill Elevator Co., milling wheat.*
Hallet & Carey Co., grain merchants.
Hiawatha Grain Co., screenings.*
McGuire Company, Arthur, shprs. b'wheat, m/wh't.*
Scroggins Grain Co., grain merchants.*

NEW YORK, N. Y.

Produce Exchange Members

Stratton Grain Co., grain merchants.*

OKLAHOMA CITY, OKLA.

Winters Grain Co., country mlg. wheat-coarse gr.

OMAHA, NEBR.

Grain Exchange Members

Bartlett-Frazier Co., grain merchants.*
Bell-Trimble Co., recvrs. and shippers.*
Crowell Elevator Co., receivers, shippers.*
Udike Grain Corp., receivers & shippers.*

PAXTON, ILL.

Watson Grain Co., corn & oats brokers.*

PEORIA, ILL.

Board of Trade Members

Cole Grain Co., Geo. W., receivers and shippers.
Dewey & Sons, W. W., grain commission.*
Feltman Grain Co., C. H., grain commission.
Luke Grain Co., grain commission.*
Miles, P. B. & C. C., grain commission.*
Turner Hudnut Grain Co., receivers and shippers.*

PHILADELPHIA, PA.

Commercial Exchange Members

Markley, P. R., grain broker.*

PITTSBURGH, PA.

Members Grain and Hay Exchange

Rogers & Co., Geo. E., receivers, shippers.*

PONTIAC, ILL.

Balbach, Paul A., grain buyers, all markets.

ST. JOSEPH, MO.

Grain Exchange Members

Bartlett-Frazier Co., grain merchants.*
Dannen Grain & Mfg. Co., grain mchts.-consignments.
E. L. Lieber, strictly brokerage, grain & feed.
Stratton Grain Co., grain merchants.*

ST. LOUIS, MO.

Merchants Exchange Members

Anheuser-Busch, Inc., feed grains.*
Langenberg Bros. Grain Co., grain commission.*
Morton & Co., grain commission.*
Nanson Commission Co., grain commission.*

SALINA, KANS.

Smoot Grain Co., oper. Salina Terminal Elevator.*

SIDNEY, OHIO

Wells Co., The J. E., wholesale grain.

SIoux CITY, IOWA

Grain Exchange Members

Flanley Grain Co., also office at Omaha, Neb.*
Terminal Grain Corporation, grain merchants.*

TOLEDO, OHIO

Southworth & Co., E. L., consignments, futures.

TOPEKA, KANSAS

Derby Grain Co., gen'l grain merchants.*

WELLINGTON, KANS.

Wolcott & Lincoln, Inc., optrs. Wellington Term. Elvtr.

WICHITA, KANS.

Board of Trade Members

Adair-Morton Grain Co., wheat, corn, oats, barley.*
Craig Grain Co., wheat specialists, consignments.
Harold-Wallis Grain Co., milling wheat specialists.
Smith-McLinden Grain Co., wheat, corn, grains, feeds.
Wichita Terminal Elvtr. Co., gen'l elvtr. business.*

WINCHESTER, IND.

Goodrich Bros. Co., wholesale grain and seeds.*

Grain & Feed Journals Consolidated, a merger of Grain Dealers Journal (Est. 1898), American Elevator & Grain Trade (Est. 1882), Grain World (Est. 1928), and Price Current-Grain Reporter (Est. 1844). Published on the 2nd and 4th Wednesday of each month in the interest of progressive wholesalers in grain, feed, and field seed. 332 South La Salle Street, Chicago, Illinois, U. S. A. Price \$2.00 per year, 25c per copy. Entered as second class matter November 27, 1930, at the postoffice at Chicago, Ill., under the act of March 3, 1879. Vol. LXXVI. No. 6. March 24, 1936.

Board of Trade
Members**KANSAS CITY**Board of Trade
Members**SIMONDS-SHIELDS-LONSDALE GRAIN CO.**

Kansas City, Mo.

Specializing in Southwestern Corn

Wire Us for Prices

Capacity 7,000,000 Bushels

DAVIS-NOLAND-MERRILL GRAIN CO.Board of Trade
Kansas City, Mo.

Operating

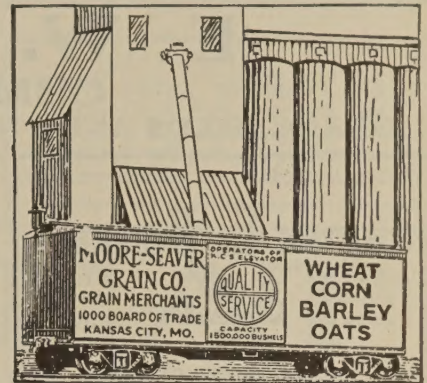
SANTA FE ELEVATOR "A"

10,200,000 BUSHELS

Modern Fireproof Storage



Ask for our bids on Wheat, Corn, Oats, Rye and Barley for shipment to Kansas City and the Gulf—Special Bin Storage Furnished at Regular Storage Rates.

*A Service of 57 Years Handling Your Cash and Option Orders***B. C. CHRISTOPHER & COMPANY**

200-206 Board of Trade, KANSAS CITY, MO.

BRANCH OFFICES—Wichita, Hutchinson, Salina, Emporia, Great Bend, Colby, Dodge City, Topeka, Atchinson, Kansas; St. Joseph, Springfield, Sedalia, Joplin, Mo.

**CONFIRMATION
BLANKS***Simple - Complete - Safe*

The use of these confirmations makes for safer business. Spaces are provided for recording all essential conditions of each trade.

Fifty confirmations in triplicate, bound with pressboard and wire stitched, size 5½ x 8".

Order form No. 6 CB. Price 75 cts. plus postage. Three copies \$2.00

GRAIN & FEED JOURNALS Consolidated, 332 S. La Salle Street, Chicago

If you would avoid trade disputes, and differences and prevent expensive errors, use triplicating confirmation blanks. You retain tissue copy, sign and send original and duplicate to customer. He signs one and returns the other.

This places the entire burden for any misunderstanding of your intentions upon the other party and protects you against the expensive misinterpretation of your trades.

Market Record Blank

For C. N. D. and Radio Markets

This book provides ruled spaces for the convenient compilation of an hourly record of the market prices of Wheat, Corn, Oats, Rye and Barley. Each sheet is ruled for a week's quotations with spaces for every business day of the week. Printed on Goldenrod bond paper and bound in books of 60 sheets, over a year's supply, with heavy pressboard hinged covers, size 9½ x 11¾ inches. Order CND 97-5. Price, 90c. f. o. b. Chicago. Weight, 14 ozs.

GRAIN & FEED JOURNALS
Consolidated

332 S. La Salle St., Chicago, Ill.

Corn Exchange
Members**BUFFALO**Corn Exchange
Members**J. G. McKILLEN, INC.**
RECEIVERSConsignments a Specialty
BUFFALO NEW YORK**American Elevator & Grain Division**

Russell Miller Milling Company

RECEIVERS, SHIPPERS AND ELEVATOR OPERATORS
CONSIGNMENTS SOLICITED

Our System of Terminal Elevators, enables us to give prompt service and reliable quality on coarse grains, durums and protein milling wheats.

Upon readers patronage of its advertisers depends the success of Grain & Feed Journals Consolidated. Mention it. Thank you.

Wood Grain Corp.

CONSIGNMENTS — BROKERAGE

BUFFALO, N. Y.

Lewis Grain Corp.*A good firm to consign to*

Corn—Oats—Soft Wheat—Barley
BUFFALO NEW YORK

DO IT NOW

Place your name and business before the progressive grain elevator men of the entire country by advertising in the Grain & Feed Journals Consolidated. It reaches them twice each month.

Board of Trade
Members**CHICAGO**Board of Trade
Members**LAMSON BROS. & CO.**

2200 Board of Trade

Established 1874

Chicago, Ill.

*"62 years of continuous service in the grain trade."*GRAIN - STOCKS
BONDS - COTTON
BUTTER - EGGS
PROVISIONS**E. W. BAILEY & CO.**

COMMISSION MERCHANTS

GRAIN, SEEDS AND PROVISIONS

1142-44 Board of Trade, CHICAGO

James E. BennettGRAIN
PROV'NS
SUGAR**& Co.**STOCKS
BONDS
RUBBER

MEMBERS

CHICAGO BOARD OF TRADE
AND ALL PRINCIPAL EXCHANGES

—PRIVATE WIRES—

*Ask for Bids***WHEAT, CORN, OATS
RYE, BARLEY, SEEDS****CONSIGNMENTS**and orders in Futures Solicited and
properly cared for in all Leading MarketsST. LOUIS KANSAS CITY
Merchants Exchange Board of TradeINDIANAPOLIS
717 Board of TradePEORIA CAIRO
11 Board of Trade 403 Board of Trade

332 So. La Salle St., Chicago

THE QUAKER OATS COMPANY

BUYERS OF

Oats Corn Wheat BarleyCedar Rapids,
Ia.Ft. Dodge,
Ia.Akron,
OhioSt. Joseph,
Mo.

CHICAGO, ILLINOIS

**To BUY or SELL
RENT or LEASE
an ELEVATOR**Place an adv. in the "Wanted" or
"For Sale" columns of the GRAIN
& FEED JOURNALS, of Chicago.
It will bring you quick returns.**CARHART CODE HARWOOD CO.****Grain Commission**

111 W. Jackson St. CHICAGO

**Harris, Burrows
& Hicks**Siebel C. Harris
Mgr. Grain Department*We Specialize in
Hedging and
Spreading Operations*

Members Principal Exchanges

135 So. La Salle St.
Chicago

Minneapolis

St. Paul

**BARTLETT FRAZIER CO.
GRAIN MERCHANTS**

Receivers—Buyers—Shippers—Exporters

111 W. JACKSON ST., CHICAGO

*Ship Your Grain or Seeds and Send Your Orders to***J. H. DOLE & COMPANY**

RECEIVERS and COMMISSION MERCHANTS

CHICAGO

PEORIA

ST. LOUIS

**Use Universal Grain Code
and Reduce Your Telegraph Tolls**

Chamber of Commerce
Members**MINNEAPOLIS**Chamber of Commerce
MembersCountry Offices: FAIRMONT, MINN. MARSHALL, MINN. GRAND FORKS, N. D.
WILLISTON, N. D. SIOUX FALLS, S. D. LINCOLN, NEBR.
HASTINGS, NEBR. NORTH PLATTE, NEBR.**CARGILL**Main Office:
MINNEAPOLIS, MINN.

CARGILL ELEVATORS INC. SEED DIVISION

Terminal Offices: DULUTH - MILWAUKEE - GREEN BAY OMAHA - PORTLAND,
ORE. - CHICAGO - TOLEDO - BUFFALO - NEW YORK - ALBANY - BOSTON
WINNIPEG, MAN. - MONTREAL, QUE.**HALLET & CAREY CO.**

Grain Merchants

Minneapolis Duluth Winnipeg

When writing advertisers men-
tion Grain & Feed Journals Con-
solidated. By so doing you help
both yourself and the publication.**CIPHER CODES**We carry the following cipher codes in stock:
Universal Grain Code, board cover...\$1.00
Robinsons Cipher Code, leather..... 2.50
Dowling's Grain Code..... 3.00
Miller's Code (1917), cloth..... 2.00
Cross Telegraphic Cipher (10th edition) 4.00
Peerless Export Grain Code.....85.00
A. B. C. Code, 5th Ed., with sup.....20.00
Baltimore, Export Cable Code.....15.00
Bentley's Complete Phrase Code.....10.00
Riverside Flour, Improved (6th Ed.)..12.50
Calpack Code (1923).....10.00
All prices are f. o. b. ChicagoGRAIN & FEED JOURNALS
Consolidated

332 S. La Salle St. Chicago, Ill.

WHEAT

AND ALL OTHER GRAINS

*Any Grade—Any Quantity—Any Time***BUNGE ELEVATOR CORPORATION**

MINNEAPOLIS, MINN.

RECEIVERS, SHIPPERS AND BROKERS**LUKE** Grain
Co., Inc.

Solicits Your Peoria Business

Consign Your Corn to Us
PEORIA, ILLINOIS

RECEIVERS GRAIN SHIPPERS

• W. W. **DEWEY** & SONS •
CONSIGN TO DEWEY
PEORIA**Geo. E. Rogers & Co.**

WABASH BUILDING PITTSBURGH, PA.

RECEIVERS—SHIPPERS

GRAIN—HAY—MILLFEED—FLOUR

Nanson Commission Co.

Grain—Hay—Seeds

202 Merchants Exchange Bldg.

ST. LOUIS, MO.

Des Moines Elevator & Grain Co.

DES MOINES, IOWA

Terminal and 14 country stations. Capacity 1,000,000 bushels

We specialize in Oats and High Grade Corn. Oats sacked for Southern Trade

Future TradingUpon Organized Commodity
Markets

by G. Wright Hoffman

Reviews the development and extent of
future trading in the various commodities
and markets; explains effect of future trad-
ing on price stabilization and operation of
future markets. Cloth bound, 500 pages,
price \$5.00, plus postage. Weight, 3 lbs.Grain & Feed Journals
Consolidated

332 S. LaSalle St. Chicago, Ill.

Crowell Elevator Co.

OMAHA, NEBR.

Federal Bonded Warehouse

Capacity 1,200,000 Bushels

Over 60 Years' Continuous Service

LANGENBERG BROS. GRAIN**COMPANY**

Established 1877

ST. LOUIS NEW ORLEANS

E. H. BEER & CO., INC.

Successors to

Chas. England & Co., Inc.

GRAIN—HAY—SEEDS

Commission Merchants

308-310 Chamber of Commerce, Baltimore

Say you saw it in the

JournalWhen you write our advertisers
Thanks**Everytime** you mention the Grain Dealers Journal to an advertiser, you
encourage him to make good on his advertised claims.

GRAIN ELEVATOR BUILDERS

HORNER & WYATT*Engineers*Designers of Grain Elevators
and Feed Mills

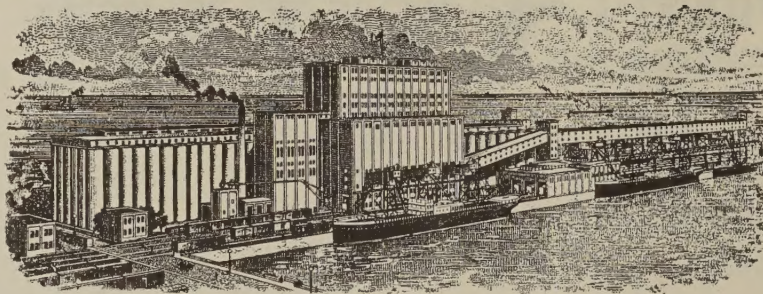
Power Problems a Specialty

470 BOARD OF TRADE KANSAS CITY, MO.

ZELNY**Thermometer System***Protects Your Grain*Estimates cheerfully given.
Write us for catalog No. 6.**Zeleny Thermometer Co.**

542 S. DEARBORN ST.

CHICAGO, ILL.

Capacity
5,000,000
BushelsEquipped with
Four Stewart
Link-Belt
Grain Car
Unloaders

PENNSYLVANIA RAILROAD ELEVATOR AT BALTIMORE

JAMES STEWART CORPORATION
ENGINEERS AND CONTRACTORSW. R. SINKS,
PRESIDENT
Phone Harrison 8884

FISHER BUILDING—343 S. DEARBORN ST., CHICAGO, ILLINOIS

H. G. ONSTAD
VICE-PRES.—GEN'L MGR.**Jones - Hettelsater Construction Co.**

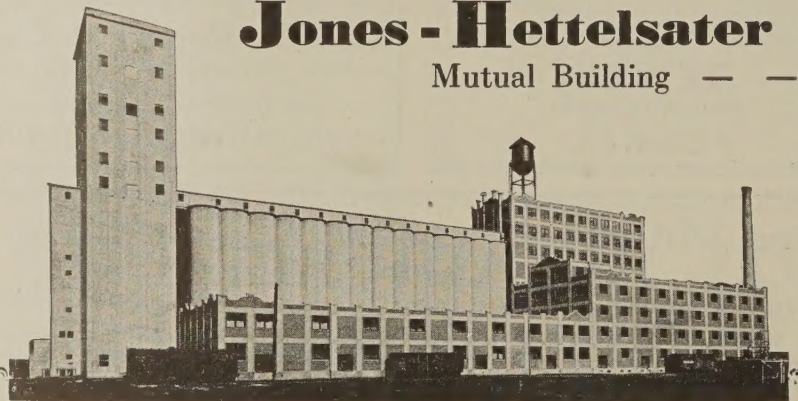
Mutual Building — — Kansas City, Mo.

*Designers and Builders***Grain Elevators****Feed and Flour Mills**Pillsbury Flour Mills Co.
Springfield, Ill.

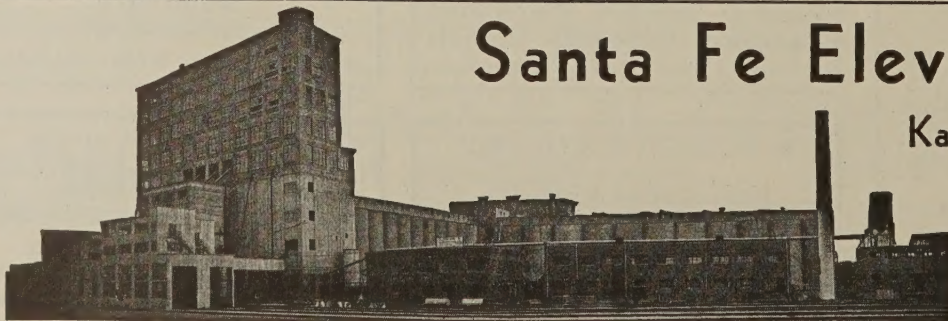
1,000,000 bus. Elevator

8 Story Flour Mill — 4 Story Cereal Mill

2 Story Warehouse

designed and constructed by us under a
single contract.**Santa Fe Elevator "A"**

Kansas City, Kans.

Capacity
10,500,000 Bushels**JOHN S. METCALF CO.***Grain Elevator Engineers and Constructors*

105 W. Adams St., Chicago

460 St. Helen St., Montreal

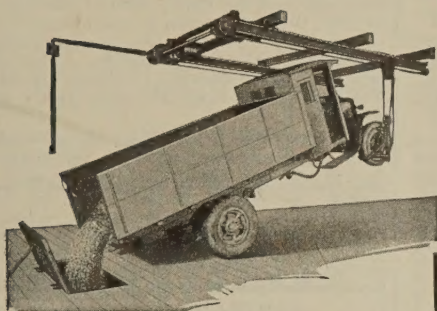
837 W. Hastings St., Vancouver, B. C.

12-15 Dartmouth Street, London, England

GRAIN ELEVATOR BUILDERS

The Barnett & Record Company
DESIGNERS **MINNEAPOLIS, MINN.** **BUILDERS**
 Grain Elevators — Mill Buildings — Industrial Plants

McMillin Truck Dump For Electric Power



In the above we are offering an entirely different type of construction than that used in any other types of overhead dumps.

With this dump the vehicle can be raised until some part of it will come in contact with the ceiling, which is a great advantage in driveways having a low ceiling. All parts in plain view and under complete control of the operator at all times. Sufficient power so it can be stopped and started at will. Hundreds in use and fully guaranteed.

For prices, plans for installation, and descriptive circular

Address to

L. J. McMILLIN
 525 Board of Trade Bldg.
 INDIANAPOLIS, INDIANA

WE SPECIALIZE

In Modernizing Country Elevators
 Our recommendations will cost you nothing. When do you wish us to submit estimates on remodeling your grain-handling facilities?
THE VAN NESS CONSTRUCTION CO.
 Grain Exchange Omaha, Neb.

WE BUILD GRAIN STORAGE

29 Years' Experience
 Send us your inquiries
POLK GENUING POLK COMPANY
 Fort Branch, Indiana

Clark's Car Load Grain Tables

Eighth edition, extended to show bushels in largest carloads, shows the following range of reductions of pounds to bushels by fifty pound breaks.

20,000	to	129,950 lbs.	to	bushels of	32 lbs.
20,000	"	74,950	"	"	34 "
20,000	"	118,950	"	"	48 "
20,000	"	140,950	"	"	56 "
20,000	"	140,950	"	"	60 "

Pounds in red ink; bushels in black, 48 pages. Linen ledger paper reinforced, bound in keratol with marginal index. Weight, 8 oz.

Price \$2.50 at Chicago

GRAIN & FEED JOURNALS Consolidated

332 So. La Salle St., Chicago

I enclose money for renewal of the Journals. Certainly miss it when it doesn't arrive every two weeks.—Charles E. Towne, Rochester, Ind.

WE REPAIR

Concrete Structures and Moisture
 Proof by
GUNTEX METHOD
Cement Gun Construction Co.
 537 S. Dearborn St. Chicago, Ill.



Concrete Costs No More

Let us prove it. Plans and estimates on your needs made cheerfully.

CHALMERS & BORTON

Designers & Builders
 28 E. 1ST ST. HUTCHINSON, KAN.

T.E. IBBERSON CO.

GRAIN ELEVATOR BUILDERS

Feed Mills Coal Plants
 Repairing and Remodeling

MINNEAPOLIS MINNESOTA

Coon Rapids, Ia.—I have taken the Journals for 23 years and could not get along without it.—William Grettenberg, Wm. Grettenberg Grain Co.

BELTING

You elevator men should look over your elevator and see what you will need during the coming season. Special attention should be given your elevator leg belts. The best quality leg belts are those made to order—to fit your special requirements. Do not wait until the belt is broken. Belts ordered in a rush rarely prove satisfactory.

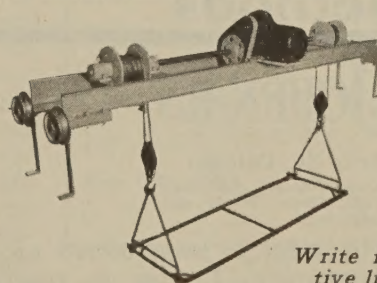
For Elevator Supplies write or wire us. Prices are the lowest obtainable for high quality products, and satisfaction is assured.

WHITE STAR COMPANY

WICHITA, KANS.

SPECIAL ELEVATOR EQUIPMENT IN STOCK AT WICHITA

THE K. C. ELECTRIC WORM GEAR OVERHEAD TRAVELING TRUCK DUMP



The sturdiest and most compact truck dump on the market. Dumps wagons or trucks; inexpensive to install; made in two sizes. Is giving complete satisfaction throughout the Southwest.

Write for detailed descriptive literature and prices

GENERAL MILL EQUIPMENT CO.

2021-2023 PENNSYLVANIA AVENUE, KANSAS CITY, MO.

Your Message

Let the Grain & Feed Journals Consolidated your message bear, To progressive grain and feed dealers everywhere.

Wanted and For Sale

The rate for advertisements in this department is 25 cents per type line each insertion

ELEVATORS FOR SALE

CENTRAL INDIANA—Elevator, feed mill and residence for sale cheap; good grain and clover section. 76E12 Grain & Feed Journals, Chicago.

Whenever there is a real opportunity of interest in the grain trade, it is usually registered in the "Wanted—For Sale" columns of the Journal.

ILLINOIS—On account of death of partner 24,000 bu. electrically equipped elevator for sale; own land; served by C. B. & Q. and T. P. & W. R. R. Chas. E. Henry, Bushnell, Ill.

WISCONSIN—Grain elevator, feed and seed business for sale. Located in rich agricultural section. Good barley territory. Elevator capacity 10,000 bus. Warehouse, 35x150 ft. On Milwaukee road tracks. Cleaning machinery. Write T. H. Cochrane Co., Portage, Wis.

NO. CENTRAL ILL.—30,000 bu. modern reinforced concrete elevator for sale on private land served by C. & N. W. R. R. Coal sheds and room for other sidelines. A prosperous business in 300,000 bu. corn and oats territory. Good schools. Owner wishes to retire. Write 76F1. Grain & Feed Journals, Chicago, Ill.

KANSAS Elevator practically sold after three insertions. Here's what the advertiser writes: "We enclose check for three insertions of our ad. We have had more than a dozen inquiries from our ad and believe that we will be able to effect a sale." This proves conclusively the value of a Journal Want-Ad.

COLORADO—8000 bu. capacity grain elevator, warehouses and coal sheds for sale. Equipped for grinding grain, cleaning and storing beans. A good wholesale and retail business in the Platte Valley Agricultural and cattle feeding district. Located at a junction point of the U. P. R. R. at La Salle. C. S. Boulter, Manager, La Salle Elevator Co., La Salle, Colo.

BARGAIN IF TAKEN AT ONCE—Some one is always looking for an elevator at a good grain point and reads these ads just like you're doing now, so if you wish to dispose of your present property, enlarge your present interests, or embark in the grain business, USE these columns to your best advantage just as others are doing. WE WILL assist you in the composition of copy free. We are in business to be of service to YOU. There is no wrong time to put an ad in the columns of the Journal. TRY IT.

ELEVATORS FOR SALE

INDIANA—70,000 bu. cribbed elevator for sale in corn and oats section of Western Ind. Own site. B/4 R. R. Good price for quick sale. Address 76C2 Grain & Feed Journals, Chicago.

SOUTHEASTERN WYO.—25,000 bus. grain elevator in a good town and a good location for sale or lease. Owner has been sick and unable to attend to business for some time. Would like to sell if possible. Price and terms reasonable. W. O. Eaton, Torrington, Wyo.

On the other end of the Journal's "Wanted—For Sale" columns you will find 9,000 grain dealers anxious to know what you have for them.

MINNESOTA—125,000 bus. iron clad frame cleaning and transfer elevator for sale, electric power, fast handling, good cleaner equipment, Northwestern road, a good transit point, and in good barley territory. Real bargain price Banner Grain Co., Minneapolis, Minn.

ELEVATOR FOR RENT

EAST CENTRAL ILL.—14,000 bu. elevator for rent; electric power; Kewanee lift; poor health reason for renting. Write J. Kemp Carson, Clarence, Ill.

ELEVATORS WANTED

LARGE SIZE ELEVATOR Wanted, Illinois, Indiana or Ohio. O. Hunter, 803 Fifth St., North, St. Petersburg, Florida.

WANT TO RENT OR buy 20 to 30,000 bushel elevator in Eastern South Dakota, Southwestern Minn., or Northwestern Iowa. Write 76E20, Grain & Feed Journals, Chicago, Ill.

IF YOU DO NOT find the elevator you want advertised, place your wants in the "Elevators Wanted" section and you will receive full particulars regarding many desirable properties not yet advertised.

SEEDS FOR SALE

SEED CORN, German Millet, Sweet Clover Seed for sale. Home grown first quality seed. Allen Joslin Seed Farm, Holstein, Iowa.

WHEN YOU want field or grass seed, write us, and we will put you in communication with nearby dealers, who have what you seek. The service is free. Information Bureau, Grain & Feed Journals, 332 S. La Salle St., Chicago, Ill.

MILLS FOR SALE

ILLINOIS—Modern feed mill equipped with up-to-date machinery for sale. Located at Chatsworth, Ill. Write to Corn Belt Elevator, Fairbury, Ill.

BRITISH COLUMBIA—Modern 40-bbl. flour mill (Water Power), for sale; store on highway; price \$5500; cost double; center of hard wheat district; custom grinding fee \$12 per ton; good business can be done; offered for sale to settle estate. Wm. Crowston & Sons, Soda Creek, B. C.

STOP! READ! THINK! One advertiser writes, "Your service brought me 24 replies." We can do the same for you. Don't wait, write now.

WISCONSIN—Flour and feed mill for sale located at Hilbert; will trade in residence within 100 mi. Mill equipped with modern diesel oil engine; lot 50x500 located along St. Paul R. R.; opportunity to sell farmers and citizens such as coal, wood, lumber, tiles, bricks, twine, machinery, etc., in connection with mill business. M. A. Hanson, Sheboygan, Wis.

SITUATION WANTED

WANT POSITION managing elevator; 20 yrs. exper.; references; go anywhere. Write 76E10, Grain & Feed Journals, Chicago, Ill.

BUSINESS OPPORTUNITIES

FOR SALE—Coal Yard—Galesburg, Mich.; Grain & Coal Business—Scotts, Mich.; Transfer Elevator—Edwardsburg, Mich. White Sales Corp., Scotts, Mich.

WHATEVER your business may be, it will find a ready market if advertised in the "Business Opportunities" columns of GRAIN & FEED JOURNALS, Chicago. 9,800 grain men look to these columns twice each month for real opportunities.

Just Like Home

GUIDE: "This, sir, is the leaning tower of Pisa."

KANSAS GRAIN DEALER: "Pisa! Pisa! No, that does not sound like the contractor's name who built my concrete elevator, but it looks like his work."

HELP WANTED

COMPETENT AND EXPERIENCED elevator managers, foremen, bookkeepers, auditors, second men and solicitors can easily and quickly be found through an ad in the "Help Wanted" column of the Grain and Feed Journals, Consolidated, Chicago, Ill.

Modern Methods

GRAIN & FEED JOURNALS

CONSOLIDATED

332 So. La Salle St., Chicago

A Merger of Grain Dealers Journal, American Elevator & Grain Trade, Grain World and Price Current-Grain Reporter.

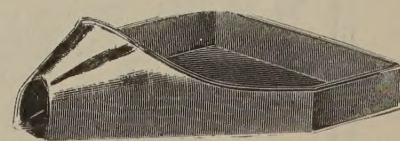
Gentlemen:—In order to keep posted on modern methods of elevator management, I wish to receive the *Grain & Feed Journals Consolidated* semi-monthly. Enclosed find Two Dollars.

Name of Firm.....

Capacity of Elevator Post Office.....

..... bushels State

SAMPLE PANS



Formed by bending sheet aluminum, reinforced around top edge with copper wire. Strong, light, durable. The dull, non-reflecting surface of aluminum will not rust or tarnish; assists users to judge of the color and to detect impurities.

Grain Size, 2½x12x16½", \$2.00; Seed Size, 1½x9x11", \$1.65, at Chicago.

GRAIN & FEED JOURNALS
Consolidated
332 So. La Salle St., Chicago, Ill.

ENGINES FOR SALE

ONE WAUKESHA 4 cylinder 80-h.p. power unit for sale. A-1 condition. Sark & Plum, Inc., Lilly Chapel, Ohio.

From the Dust House

There's one sure thing about wild oats; they never fail to grow.

There's a terrible surplus of wheat in this country, but it could be worse. It could be spinach.—*Life*.

The ant is a lucky little guy. He has no government to take his savings and distribute them among the grasshoppers.

"There are plenty of nuts," the department of agriculture announces. Naturally AAA had no nut-control program.

Many a rural romance has started on a gallon of corn and ended with a full crib.—*The Oil Can*.

"Wheat—What is it?"

"It is a grain grown to keep the farmer broke and the Buyer crazy."—Bulletin Board of a Kansas Elevator.

Success consists not so much in sitting up nights as being awake in the daytime.

Your RADIO MARKET Record

A boon to the grain dealer who keeps a convenient, permanent record of market quotations for ready reference.

This form provides convenient spaces for hourly quotations on Wheat, Corn, Oats, Rye, and Barley. A week on a sheet, and a year's supply of sheets in a book.

Order Form CND 97-5.

Price, \$1, plus postage. Shipping Weight, 1 lb.

**Grain & Feed Journals
Consolidated**

332 S. La Salle St. Chicago, Ill.

Improved Duplicating Grain Tickets

Use of Form 19GT as a scale book saves much time and labor as one writing with the use of carbon gives a complete record and at the same time, a ticket for the hauler.

Each of the 125 original leaves bears four scale tickets, is machine perforated, printed on white bond, size of tickets 3x6 $\frac{3}{4}$ inches. The 125 duplicates are printed on manila, but not perforated. Check bound at top of tickets with hinge top cover, 500 tickets in each book arranged horizontally. Each book 7 $\frac{1}{2}$ x12 inches. 250 leaves with 5 sheets of carbon.

Each ticket has spaces for following record: "Owner, Hauler, Grain, Grade and Dockage, Gross, Tare, Net, Total Dockage, Net Pounds, Bushels, Price and Amount, Storage Ticket No., Station Ticket No., and Date, Weigher, Name of Firm or Buyer." Order Form 19GT Duplicating. Price \$1.20 plus postage.

Triplacating is the same form as 19GT described above with 125 sheets strong white tissue for buyer, bound in between the original tickets for hauler and the duplicate for headquarters so as to make three copies with one writing. Five sheets dual faced carbon, 375 leaves, weight 3 lbs. Order 19GT Trip. Price \$1.65 plus postage.

**GRAIN & FEED JOURNALS
Consolidated**

332 So. La Salle St. Chicago, Ill.

MACHINES FOR SALE

CORN CUTTER & Grader—has motor—used very little. 76D6 Grain & Feed Jnrls., Chicago.

A GOOD BUY—Manlift 50' high, also truck dump for sale. W. W. Pearson, West Point, Ind.

FEED MIXER—one ton—floor level feed—has motor—good as new. Write 76D8 Grain & Feed Journals, Chicago, Ill.

\$25 TAKES A TWO—Compartment Brown-Duvel moisture tester, complete, ready for use. Geneva Milling & Grain Co., Geneva, Ind.

FEED MIXER for sale, has motor, and a late machine. Need space. Will sacrifice. Write 76D5 Grain & Feed Journals, Chicago, Ill.

HAMMER MILL with 25-h.p. motor and all attachments. Priced to sell. Write 76D7 Grain & Feed Journals, Chicago, Ill.

EDTBAUER DUPLEX Automatic Net Weighing Scale for small sacks or packages. Good as new. Bargain at \$95.00.

Mayer Bros. Mill, Bellefonte, Pa.

Some **SERVICE** to your ads. I sold my elevator to the first man that answered the ad. But I received a nice number of inquiries, too. Kansas Dealer.

BARGAINS—S. Howes bran packer, Sprout Waldron No. 1 corn sheller, Sidney corn sheller, Monarch 16-inch B. B. Attrition Mill, 60 bu. hopper scale, Unique crusher, spiral conveyors, etc. For further information and prices write Mayer Bros. Mill, Bellefonte, Pa.

MIDGET MILL Bargain—40-bbl. Midget Marvel flour mill outfit complete with unique double scourer, Anglo separator, Columbian feed governor, dust collectors and all necessary shafting, pulleys, bearings, belting, elevators and spouting. We will sell with or without 30-h.p. motor. This equipment guaranteed to be in 1st class condition. Priced right. For further information write or call

Mayer Bros. Mill, Bellefonte, Pa.

NEW AND REBUILT MACHINERY

1 vertical half ton mixer (new); 1 horizontal half ton mixer; 1 corn cutter and grader; 1 corn cracker and grader; clipper, Invincible and Eureka grain cleaners; 2 and 3 pair high roller mills; 50-h.p. motor driven hammer mill; motor and belt driven attrition mills; automatic hopper and platform scales; 2 water wheels; elevators, pullies, hangers, etc. Everything for the feed mill and elevator. Write your wants to A. D. Hughes Co., Wayland, Mich.

MACHINES WANTED

A GOOD USED NO. 16 clipper clover seed cleaner wanted, with or without motor. C. G. Wolf, North Liberty, Ind.

MACHINERY FOR A 100 barrel flour mill wanted. Must be in good condition. Pampa Milling Company, Pampa, Tex.

USED VERTICAL FEED mixer wanted, 1 or 1 $\frac{1}{2}$ ton, floor level; two 5-h.p. motors and starters; one cracked corn grader; one platform scale. Menno Mlg. & Gr. Co., Menno, S. D.

USED SEWING machine wanted, suitable for sewing the tops of paper bags; also Union Special machine style 21800B sewing head style 14500D preferred, but any make that does a good job will receive consideration. Write 76F5, Grain & Feed Journals, Chicago, Ill.

MOTORS FOR SALE

ELECTRIC MOTORS, Generators, Air Compressors, engines, pumps, all makes, types and sizes. All completely rebuilt, One Year Guaranteed and attractively priced. Write us on your requirements. Rockford Electric Equipment Co., 728 South Wyman St., Rockford, Illinois.

DYNAMOS AND MOTORS WANTED—Buyers and this equipment are reached in largest numbers and at the least expense through the use of the "DYNAMO-MOTORS" columns of Grain & Feed Journals—the medium for power bargains.

RAT EXTERMINATOR

RAT LUNCHES—Kills rats and mice without poison. Ready to use. Just lay them out. Endorsed by agricultural authorities. \$1 large package—\$3.50 a carton prepaid. Salesmen-Distributors wanted. Rat Lunches Co., Carroll, Ia.

MISCELLANEOUS

FURNITURE & WOODWORK Beautifier—Our wonder product has repeat market wherever sold. Buy five gallons bulk. Sell under your own name at 200% profit. Send for free sample and profit plan. Schuh, Inc., 1311 Chamber of Commerce Bldg., Cincinnati, Ohio.

SAMPLE ENVELOPES

SAMPLE ENVELOPES—SPEAR SAFETY—for mailing samples of grain, feed and seed. Made of heavy kraft paper, strong and durable; size 4 $\frac{1}{2}$ x7 inches. Have limited supply to sell at \$2.35 per hundred or 500, \$10.00 plus postage. Sample mailed on request. Grain & Feed Journals, 332 S. La Salle St., Chicago, Ill.

Scale Ticket Copying Book

Contains 600 original and 600 duplicates of form shown herewith. Four originals and four duplicates to each leaf. Printed and perforated so outer half of sheet bearing originals may be folded back on the duplicate, thus giving an exact reproduction of all entries on the original. Leaves are machine perforated between tickets so they may be easily removed without tearing.

Printed on bond paper, check bound, in heavy board covers, size 9 $\frac{1}{2}$ x11 inches, and supplied with 6 sheets of No. 1 carbon. **Order Form 73. 150 pages. Price \$1.30, plus postage.** Weight, 2 $\frac{1}{4}$ lbs.

Cash with order for twelve books earns 10% discount.

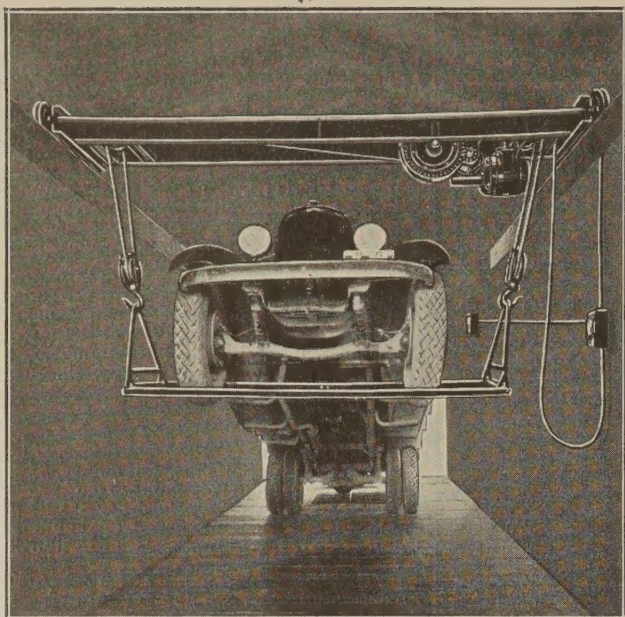
Send all orders to

Grain & Feed Journals Consolidated

332 So. La Salle St., Chicago, Ill.

No. _____	19 _____
Load of _____	
From _____	
To _____	
Price per bu. _____	Gross _____ lbs.
Test _____	Tare _____ lbs.
Man ON—OFF _____	Net _____ lbs.
	Net _____ bu.
	Weigher _____

(Three-Fourths Actual Size)



BENDER ELECTRIC LIFT

For every type elevator, high or low driveway. Will dump any size truck or wagon in one or more pits. All steel construction, electric welded. Self-locking worm drive with 2 H.P. geared motor. Shipped completely assembled. Simple and inexpensive installation. Write for full description.

BENDER HOIST MFG. CO.
OMAHA, NEBRASKA

Spontaneous Ignition of Grain Dust

is always a fire hazard in the grain elevator and feed mill.

Reports to us indicate an increased fire hazard in storing damp dust from the grain of the last crop. Dust should not be allowed to accumulate or remain in your plant.

We recommend extreme vigilance. Aerate your dust house and keep your plant clean.

Mutual Fire Prevention Bureau

Department of
Association of Mill and Elevator Mutual Insurance
Companies.

230 East Ohio Street
Chicago, Illinois

Have You Seed For Sale?

Do You Wish To Buy Seed?

See our "Seeds For Sale—
Wanted" Department
This Number.



GRAIN & FEED JOURNALS

CONSOLIDATED
INCORPORATED

332 S. La Salle St., Chicago, Ill., U.S.A.
Charles S. Clark, Manager

A merger of
GRAIN DEALERS JOURNAL
Established 1898

AMERICAN ELEVATOR &
GRAIN TRADE
Established 1882

THE GRAIN WORLD
Established 1928

PRICE CURRENT—GRAIN REPORTER
Established 1844

Published on the second and fourth Wednesdays of each month in the interests of better business methods for progressive wholesale dealers in grain, feed and field seeds. It is the champion of improved mechanical equipment for facilitating and expediting the handling, grinding and improvement of grain, feeds and seeds.

SUBSCRIPTION RATES to United States, Canada and countries within the 8th Postal Zone, semi-monthly, one year, cash with order, \$2.00; single copy current issue, 25c.

To Foreign Countries, prepaid, one year, \$3.00.

THE ADVERTISING value of the Grain & Feed Journals Consolidated as a medium for reaching progressive grain, feed and field seed dealers and elevator operators is unquestioned.

Advertisements of meritorious grain elevator and feed grinding machinery and of responsible firms who seek to serve grain, feed and field seed dealers are solicited. We will not knowingly permit our pages to be used by irresponsible firms for advertising a fake or a swindle.

LETTERS on subjects of interest to those engaged in the grain, feed and field seed trades, news items, reports on crops, grain movements, new grain firms, new grain elevators, contemplated improvements, grain receipts, shipments, and cars leaking grain in transit, are always welcome. Let us hear from you.

QUERIES for grain trade information not found in the Journal are invited. The service is free.

CHICAGO, ILL., MARCH 25, 1936

REPLACING a burnt out fuse with a wire or nail is an extremely dangerous practice.

FATAL ACCIDENTS to grain elevator operators, who have indiscreetly attempted to shift a moving belt, have been reported in our news columns with alarming frequency recently.

CORN OF MANY sections continues to contain such a high percentage of moisture that most of it grades four and five so shippers prefer to sell for delivery at nearby points, thus reducing the chances of grain heating before reaching destination.

THE DEPT. OF AGRICULTURE'S survey of farmers' intent to plant reflects such a marked increase in the acreages to be planted to the various grains that farmers seem overly glad to be free from all restrictions and limitations. The greatly increased acreage of each grain should help to swell the business of country elevators and make exports possible.

OVERBIDDING the market has resulted in many barley buyers paying much more for choice malting barley than was justified by the supply and probable demand. This in a measure explains the nervous jumps in the prices prevailing in some central markets during the marketing of the last crop.

OWNERS of grain elevators on railroad right of way can avoid assuming all the liabilities of the old unreasonable lease by protesting vigorously to lessor and refusing to accept any lease which makes elevator owner liable for damages as is recited on page 176 of the Journal for March 11th.

LOOSE LEAF account books nine feet long bearing forty-nine columns might save some work in a wholesale house having a hundred departments, but their use by a country elevator operator calls for a lot of extra labor, needlessly wastes a lot of expensive paper and multiplies the opportunity for entering in the wrong column.

THE PESSIMISTS on the honor roll of the Crop Killers Union not content with killing much of the winter wheat crop by freezing are persistently predicting a vicious attack by the periodic cicadas. These destructive pests, commonly though erroneously called the 17-year locust, are promised to appear early in the Ohio Valley States in large numbers.

PERMITTING A FARMER to cajole you to raise your posted price convinces him your bids are not all that is justified by the prices prevailing in the central markets. Sacrificing profits for volume of grain purchased may be gratifying to overbidders at the time of buying, but proves most disconcerting at the end of the year when the supply of red ink must be renewed.

MANY FIRES have been extinguished in their incipency as the direct result of the installation of fire extinguishers and water barrels at every convenient point about the elevator. Property owners are so thoroughly convinced of the value of the protection they provide them of their own volition, so it is no longer necessary for fire insurance field men to keep demanding their installation.

MANY FARMERS are selling remnants of their crops over the telephone and thereby increasing the chances of non-delivery of grain sold should the market shoot up. In fact, many buyers have experienced so many defaults on telephone sales they are now confirming purchases with written contracts and thereby insuring more deliveries by sellers. The hazards of buying the farmer's grain on oral contracts have resulted in many unexpected losses to country buyers.

STRANGERS who tender large checks on distant banks in payment for small purchases are often in desperate need of cash as was learned recently by an Indiana grain dealer, when a Kentucky customer neglected to return for goods bought and paid for with a spurious check.

GERMINATION TESTS of corn intended for planting have proved very disappointing in many cases. However, some persevering elevator men have repeated their tests of the same samples with more encouraging results so they are now making several tests of each lot of seed corn.

OWNERS OF SCALES and driveways installed during the horse and wagon age can not use them in receiving grain from large capacity overloaded trucks without courting unusual and unnecessary hazards. A farmer whose wagon dropped through the floor of an elevator at Stonington, Ill., recently obtained an award of \$3500 damages from a local jury. He sued for \$20,000. While it is not probable that such a large award will be upheld by the higher courts, suits of this character are more than annoying and always expensive. It is far safer and wiser to install strong scales of large capacity and to build driveways strong enough to withstand any load.

ENTERTAINMENT DAYS at country elevators have helped to promote cordial relations with farm patrons to such an extent that Special Days with attractive prizes and entertainment features are being used more and more by country grain buyers to attract farmers to their elevators. The enlistment of the assistance of community bands and singing classes; the offering of special prizes for sport contests, and the employment of moving pictures, as well as free lunches, has helped to make these business-building entertainments more attractive. Doubtless when the new crop starts to move, more prizes will be offered for large loads of different kinds of grain.

PRECAUTION IS a most excellent characteristic for the manager of a country elevator, often beyond the fire limits. Two months ago a Mt. Pulaski, Ill., elevator wrecked its rotten hose in extinguishing a threatening fire in a truck standing on the elevator scales. Fortunately a new 150 ft. of hose was installed and recently was found of real help in extinguishing a fire in a large electric motor in the elevator. No elevator has ever been known to have installed more fire fighting apparatus than was needed when the fire was discovered. Such precaution not only reduces the cost of fire insurance, but it greatly reduces fire losses and business losses due to interruption.

LOCAL MEETINGS of members of the trade generally promote cordial relations and put competitors in the mood to handle grain on a safe margin. Dealers who absent themselves from neighborhood gatherings of this character handicap their operations with an unreasonable prejudice.

ACCIDENTS IN country elevators are becoming so frequent and result in so many serious injuries to workmen, few elevators now operate without being well protected by compensation insurance. Every elevator owner is anxious to prevent as many accidents as possible and moving machinery is generally well guarded not only for the protection of employees, but for safeguarding customers and other visitors.

Soil Conservation Announcement Falls Flat

The announcement by the Sec'y of Agriculture Mar. 20 of the basis for payment of bounties to farmers to encourage them to desist from bad farming practice, adopt soil conservation methods or to continue in such good soil improving work as already practiced by the individual has been received without the enthusiasm that has hitherto electrified the community when a cash benefit payment scheme was broached.

The lack of enthusiasm may be due to a feeling that the benefit checks may not be as large as during the past year, or that the payments may not offset the reduction in farm income resulting from a reduced acreage in the "depleting" crops that have been grown in the past solely because they were convertible into cash at the grain elevator.

The Washington bureaucracy reserves to itself the delightful duty of sending out benefit checks while unloading on county com'ites the burden of adjusting claims of rival farmers.

Eventually the program must defeat itself by increasing the fertility of the soil and the consequent yield of crops to the point where surpluses will again become burdensome with their concomitant of low prices.

This consequent overproduction may be expected to manifest itself first in the dairy and feeding industries as an outlet for the grass crops the acreage of which must be increased to comply with the law.

The contemplated diversion of not over 15 per cent of the acreage to soil improving crops while leaving to the individual farmer his choice of what "depleting" cash crops to grow will drive him to concentrate on producing the maximum yield of the crops naturally adapted to his soil, thus accomplishing nothing like the crop reduction that was the real aim of the unconstitutional A.A.A. crop control law.

Will Grade Purchases More Accurately

No observing grain buyer of average intelligence could long handle grain from trucks to box cars without learning most of the essential characteristics of the various grades of grain passing through his elevator, yet many careless dealers continue to ignore grades and buy grain by kind. They know that they must sell by grade and should know that by carefully classifying their purchases and mixing their shipments they should materially increase the net returns each season.

By special training every grain buyer should develop a keener observation and a more accurate judgment of quality in the grains grown in his section.

The holdings of grain grading schools at Purdue University and elsewhere is a timely recognition of the grain buyers' need of special training in the proper classification of the grain he buys. Then, too, if he be familiar with the limitations of the different grades he can clean and mix his shipments to greater advantage and surer profit.

The Improvements Needed in Your Elevator

The many depressing factors discouraging grain elevator operators during the last five years have helped to delay their making much needed improvements in their grain handling facilities, in fact most of them have postponed repairing and remodeling so long the old elevators are no longer equal to the trying task of handling and conditioning another crop on its way from trucks to box cars.

Improved highways thruout the land have paved the way for the employment of larger and larger trucks in the marketing of the country's grain and seed crops, so it has become necessary for the country buyer who is anxious to get a fair share of the grain of his community to modernize his plant, rejuvenate his mechanical equipment and increase the receiving and shipping capacity so as to speed up his operations and minimize the manual labor necessary to care for the grain passing through his elevator.

Larger and faster handling facilities are imperative if the elevator operator is to retain the patronage of his old customers or win new trade, because enterprising competitors will install up-to-date facilities for expediting the handling of a larger volume and thereby lure the discriminating farmers from the old, out of date plants.

Real improvements in the mechanical equipment for all elevators have been perfected in such attractive numbers during the recent years it is puzzling to decide the most advantageous point

at which to begin the rejuvenation of obsolete facilities. However, it is most certain that the increased efficiency and economy of power, time and labor attainable through the modernization of the average elevator would more than pay for the improvement in the handling of the first good crop. The new business attracted by the modern facilities would also help to justify the improvement.

Spontaneous Combustion in Your Dust House

Much grain of the last crop contained excessive moisture so the dust and scourings resulting from its cleaning and handling also contains more moisture than usual. Dust and fine dirt confined in close quarters always has a tendency to heat, but when stored in a damp place or stored when damp it is sure to heat.

A pile of elevator dust in any dark corner is a real fire hazard and always intensified by live insects or dampness.

So many fires have originated in these dangerous accumulations since the last crop started to market good housekeepers get the jitters every time they find a smoking pile about their plants.

Government Ownership of Railroads Not Wanted

Whenever grain dealers demand a cut in freight rates to compete with trucks, whenever selfish interests demand waterway improvement of rivers, whenever labor unions demand more pay for shorter hours of railroad labor, whenever states regulate rates downward, an impetus is given toward what no one now desires — government ownership and operation of railroads.

The bill by Senator Wheeler of Montana paves the way for ownership by the government after every effective pressure group of politics, business, agriculture and labor has promoted policies destroying the earning capacity and credit of the railroads.

When the railroads ask for legislation such as the Pettengill bill to repeal the long and short haul section of the Interstate Commerce Act so the rails can earn more on the long haul by a voluntary reduction of rates they meet with determined resistance by shippers' organizations such as the Mississippi Valley Ass'n and the western intermountain rate ass'n.

Besides the inefficiency that marked railroad operation under the McAdoo regime there would result under government ownership an increase of 1,000,000 in the number of government employees; and by reason of purchasing \$2,000,000,000 worth of railway materials annually the government would become a socialistic dictator to the industries of the country.

Legislation at Washington

S. J. Res. 225 by McAdoo proposes an amendment to the constitution empowering Congress to enact laws in aid of agriculture.

The independent offices appropriation bill carrying \$440,000,000 for the farm conservation law was signed by the president Mar. 20.

S. J. Res. 221 by Nye would amend the constitution empowering Congress to regulate the sale and marketing of all agricultural commodities.

The Smith anti-lobby bill would force some groups out of existence by the requirement that there be submitted to the House clerk a detailed statement showing all contributions.

Senator Wheeler's Bill.—New snooping channels for the harassment of business, with the federal trade commission turned into a police court, are predicted by the Chicago Ass'n of Commerce if the Wheeler bill now pending in the senate at Washington is passed. In urging the Illinois delegation in congress to vote against the measure, the association points out that the amendments to the federal trade commission act provided in the bill would make every individual, partnership or other commercial group engaged in interstate commerce subject to commission investigation.

The Lonergan bill to give the federal government jurisdiction over streams no matter how small into which industrial wastes are discharged is condemned by the Illinois Manufacturers Ass'n as an unprecedented and unnecessary extension of governmental jurisdiction and supervision over the waters of Illinois and other states by an appointive bureau neither responsible for nor particularly interested in local conditions.

R. M. Field, executive vice pres. of the American Feed Manufacturers Ass'n, condemns the proposed amendments to the Federal Trade Commission Act in S. 3744 and H.R. 10385. He advises members in a recent bulletin to write their senators and congressmen on this bill, saying: This bill would authorize the Commission to institute upon its own initiative and without orders from Congress or the President, any investigation it sees fit. This bill practically creates, to use a term, "AN INDUSTRY AND PERSONAL OGPU," and authorizes the Commission to investigate deceptive acts and practices in commerce and would enable the conduct of so-called "fishing expeditions" into business activities and relations whether or not their acts are in competition. Under the present Federal Trade Commission Act, the Commission's investigation powers are confined to those affecting "unlawful methods of competition." The Commission under this bill can conduct inquiries of any business firm and the business conduct, business practices and business management of any person, partnership or corporation engaged in Interstate Commerce, excepting banks and common carriers subject to the Act to regulate commerce. The investigation practices of any European dictator would be in effect in this country with the passage of this bill.

A "windfall" tax upon income resulting from non-payment or refunding of A.A.A. processing taxes was agreed upon Mar. 23 by a sub-committee of the ways and means committee of the House. The sub-committee recommends a 90 per cent tax, expected to yield over \$100,000,000. Hearings on the new tax program will begin Mar. 30, according to Chairman Doughton.

The Robinson-Patman-Utterback bills to regulate merchandising practices according to the Millers National Federation originally were designed to stop certain detrimental practices of chain stores, but in their present form they go way beyond that problem and attempt to regulate just about everything in the merchandising field whether or not there is any need for it. In fact, these bills would come pretty close to revolutionizing the merchandising of all staple products. In the case of a commodity like flour, the price of which depends almost directly upon raw material costs, it would be very close to impossible for the manufacturer to comply with the complex terms of this legislation and to attempt to establish differentials for different classes of trade.

Believe it or not H.R. 10764 introduced in the House of Representatives Jan. 30 and H.R. 10805 introduced the next day both provide that, "Federal judges are forbidden to declare this Act of Congress unconstitutional. No appeal shall be permitted in any case in which the constitutionality of this Act is challenged, the passage by Congress of this Act being deemed conclusive presumption of its constitutionality. Any Federal judge who declares this Act unconstitutional is hereby declared to be guilty of violating the constitutional requirement of 'good behavior' upon which his tenure of office rests and shall be held by such decision ipso facto to have vacated his office, and the President of the United States is hereby authorized to nominate a successor to fill the position vacated by such judicial officer."

Legislation to ban 11 unfair trade practices was recommended Mar. 20 by the industrial council of Geo. L. Berry in a report to the president stating also that "open price reporting for the protection of both buyers and sellers should be permitted and sponsored by the government. Competition should express itself openly and fairly, and not in secret nor discriminatory forms." Trade practices to be proscribed are: Employment of workers at less than prevailing wages or for more than prevailing hours in the industry concerned; sales below cost "when for the purpose of misleading the public or injuring a competitor"; loss leader transactions; circulation of false or misleading information; secret or open rebates; defamation of a competitor; payment of unearned allowances and giving special services; inducing breach of contract; misbranding; price discriminations which bear "no reasonable relation to savings in selling, manufacturing or transportation costs," and promoting sales by selling, buying, or exchanging other commodities below market price.

The Senate Interstate Commerce Committee has voted to report favorably Senator Wheeler's bill to expand the powers of the Federal Trade Commission. A brief in opposition has been filed with the House Committee by the Illinois Manufacturers Ass'n.

The Commodity Exchange Bill seems to be making no headway. Apparently the strong resolutions adopted by the state farmers elevator associations condemning this interference with the free functioning of the farmers' market is teaching congressmen that this bureaucratic measure has no substantial support among the farmers.

Proposed New Processing Taxes

The House ways and means committee has received from the A.A.A. a schedule of proposed processing taxes, that may or may not be adopted.

Commodities previously taxed are all included in the new schedules and numerous articles have been added.

New proposed rates on commodities taxed under the old A.A.A. and the estimated revenue to be derived from same are:

Wheat—Eight cents a bu., to yield \$35,440,000.
Corn—Six cents a bu., to yield \$7,500,000.
Hogs—Thirty cents per cwt., live weight, to yield a total of \$27,000,000.
Cotton—A tax of 1½¢ a lb., to yield \$40,500,000.
Rice—A tax of ¼¢ a lb., to yield \$4,097,000.
Peanuts—A tax of ¼¢ a lb., to yield \$2,128,000.
Sugar—A tax of ¼¢ a lb., to yield \$64,540,000.
Tobacco—The schedules are divided among various kinds of tobacco and apparently show no tax on the growing of the commodity. There is a proposal, however, to tax manufactured products—cigars, cigarettes, chewing and smoking tobacco—in addition to the present excise taxes. It was estimated that the new levies would yield about 11 million dollars a year.

Proposed new levies and their estimated revenue are:

Barley—Six cents a bu., to yield \$4,100,000.
Beef cattle and calves—Eight cents a cwt., live weight, to yield \$8,500,000.
Rayon—A tax of 1.8¢ a lb., to yield \$3,500,000.
Silks—A tax of 3.8¢ a lb., to yield \$2,500,000.
Spirits—Except brandy, 3¢ a gallon, to yield \$3,000,000.
Flaxseed—A tax of 9.33¢ a bu., to yield \$1,800,000.
Perilla and hempseed oil—A levy of ¼¢ a lb., to yield about \$750,000.

Anti-Basing Point Bill—S. 4055

Senator Wheeler's bill, to be known as the "Anti-Basing Point Act," aimed at "Pittsburgh-plus," is brief, but would have widespread effect upon all selling by manufacturers and wholesalers. The bill adds the following four sections to the anti-trust act of Oct. 15, 1914:

Sec. 27. It shall be unlawful for any person in commerce to add to the shipping-point price of any commodity for sale by him a charge for delivery to destination other than the actual cost of delivery thru such agency as the purchaser may elect to specify.

Sec. 28. It shall be unlawful for any person to enter into an agreement or understanding, express or implied, with any other person or persons to use, or to continue or maintain, any method or system whereby such person shall quote or charge for any commodity, in the course of commerce, prices which shall include as an item or element thereof any amount or amounts, measured by any freight or other transportation rates, not actually defrayed by such person in the delivery of said commodity to his customers.

Sec. 29. It shall be unlawful for any person to quote a delivered price for any commodity sold in commerce without stating what portion thereof has been, or is to be, actually disbursed by such person for freight or other cost of transportation, and without giving the prospective purchaser the option of accepting delivery free on board such person's shipping point, at a price which shall be derived by subtracting from the delivered price quoted the actual amount disbursed or to be disbursed by such person for freight or other transportation costs.

Sec. 30. Proceedings on behalf of the public, and by private persons deeming themselves aggrieved by alleged violations of sections 27, 28, or 29 of this Act, may be undertaken and prosecuted in the same manner, to the same degree, and with the same procedure and powers, except insofar as the same shall be clearly inapplicable, as are provided, with respect to proceedings on behalf of the public or by private persons, by sections 4, 6, 11, 12, 13, and 15, to 19, inclusive, and the second paragraph of section 5 of this Act.

Happiness is a thing to be
practiced like the violin.

Lord Avebury.

Asked—Answered

[Readers who fail to find trade information desired should send query for free publication here. The experience of your brother dealers is worth consulting. Replies to queries are solicited.]

Protection Against Liens on Grain?

Grain & Feed Journals: What is the wording of the rubber stamp that some grain buyers use in stamping the backs of checks given to farmers in payment for grain delivered to the elevator? The purpose is to protect the buyer against persons selling grain against which there are outstanding liens of landlords and chattel mortgagees.

I am tangled up now in some mortgaged grain I bought long ago; and am anxious to give myself all the protection possible from now on.—Norman F. Butterfield, Ritchie, Ill.

Ans.: The approved form reads: "In accepting and indorsing this check I warrant to the drawer thereof that I am the sole owner of the product for which this check is issued, that I have a clear title to the product delivered, and that it is free of any mortgage, landlord or other liens."

The value of the foregoing indorsement lies in its proof that the indorser was guilty of "obtaining money by false pretenses," if there was a lien. If he has or can get any money from friends or relatives he would reimburse the grain buyer rather than go to jail.

Social Security Act?

Grain & Feed Journals: What is required of an employer under the new federal and state unemployment insurance and old age pension law effective Jan. 1, 1936?—St. Francis Milling Co., St. Francis, Kan.

Ans.: Under the Social Security Act every employer of 8 or more persons not in the 7 exempt classes must make payroll contributions, the first, of 1%, for 1936 due Jan. 31, 1937, 2% for 1937 wages and expenses for labor and 3% thereafter.

To be in position to calculate payment the employer must now be accumulating data on his workers in detail. As much as 90 per cent may be deducted from the federal payments if paid into a state fund approved by the federal board. The federal board has approved the security laws of Alabama, California, New Hampshire, Oregon, Washington, District of Columbia and New York; but last week the court held the New York law patterned after the federal law, to be unconstitutional.

The treasury department has ruled that employers claiming to be exempt should keep records that will establish their exemption.

Employees must pay an old-age annuity tax of the same percentage as that paid by employers and deducted by the employer from wages paid, except when the employee is 65 years of age or older.

The federal government will not pay out the benefits directly to individuals, but to the states for distribution under state laws approved by the federal authority. Thus employers and employees contributing will receive none of the benefits unless the state in which they reside has a state social security law. The tax collection is simple; its distribution is most complicated.

Excessive Lease Charges

Grain & Feed Journals: We have two elevators at Ambia, both served by the Nickel Plate Railroad. One of these sets on our own property and we also own the switch track that serves it. Every little while the railroad figures out that a new frog is needed in that switch or new ties are needed under the rails, and sends us a bill for the needed items, plus the labor of putting them in.

The other elevator we acquired from Summers Bros. about 18 months ago. This elevator sets partly on its own property and partly on the railroad right of way, utilizing a plot of railroad property approximately 15 feet wide and 40 ft. long. The railroad owns the particular switch track that serves this elevator. This elevator we use only for storage purposes, doing all shipping out of our original elevator.

For many years Summers Bros. paid the Nickel Plate \$60 a year for the lease on the little patch of railroad ground that was being used. We have paid nothing so far, feeling that \$60 a year, based on 30c per foot of track, and the remainder for the land involved, is excessive. Since we have owned the property the railroad has set no car at this elevator. Also the same switch track serves a bulk oil station farther down the switch track, which has a car spotted about once a week, and the railroad leases the track privileges to the bulk oil station for only \$5 per year.

With no service to the elevator the railroad demands that we lease 100 ft. of track at 30c a foot, and pay \$30 additional for the little patch of land in use.

We understand that the railroad has no deed or title to the grant of land over which this branch operates.

Farm land values in the neighborhood of the elevators are from \$50 to \$75 per acre. Property in the little village of Ambia is worth even less, a residential lot, large size, can be bought for \$50 or less.

We have no objection to paying a reasonable amount for the lease of the ground but consider \$60 per year as excessive. Especially since our original elevator, on our own land entirely, gives the railroad more business than all other freight producers in and out of town.

What is our position? Can we force the railroad to write the lease it threatens to cancel, at a reasonable figure, based on surrounding land values? Of course, we want switching facilities at the elevator.—John Grogan, the Ambia Grain Co., Ambia, Ind.

Ans.: Occupant of right of way can not force the railroad to write the lease it threatens to cancel. The legal position of the railroad company, if it owns the land, is that of an ordinary landlord who can eject a tenant on expiration of lease.

It is inexpedient, however, for either party to insist on legal rights. Elevators and warehouses on the right of way bring traffic to the railroad. No more rental should be charged than for similar ground off the right of way in the vicinity, or 6 per cent on the valuation. The shipper should tender this fair amount, stating how the sum is figured; after which it will be up to the land department of the railroad to act. Usually the land agent is smart enough to see that his record is made worse if he proceeds to eject a tenant who produces business for his employer and loses the small rental with no corresponding benefit to his company; on the other hand losing traffic and gaining ill will.

The demand for exorbitant rental is only a bluff, to be dropped if it fails to work.

Grain Swindlers to Prison

On information furnished federal authorities by the Chicago Board of Trade, three of four men alleged to have swindled residents of the Central West of more than \$100,000 in illegal grain transactions have gone to prison. The defendants, Sam Sloan, David Winston and Albert Knapp, were sentenced by Federal Judge Charles E. Woodward. Edward Sloan, brother of Sam and the fourth man in the case to be found guilty of using the mails to defraud, was fined \$1,500.

None of the defendants was a member of the Board of Trade. The government claimed they operated as the Western Grain Market Service and the W. J. Bell Co., circularizing "prospects" in the Grain Belt with the lure of tremendous profits they claimed to be able to produce by their activities on an exchange outside the United States.

Soil Conservation Payments

The report of the Chicago com'te on conditions of payment of benefits under the new "Soil Conservation Act" may be taken as fairly representing the program that will finally be announced by the Sec'y of Agriculture.

Compared with the average for that county, as a base, farms will be divided into two classes, those that had less and those that had more than the average of soil conserving crops in the county.

That farmers who adopt soil conserving practices in 1936 be rewarded for adopting such methods and that farmers who are already following systems of farming which prevent soil erosion and conserve and maintain soil fertility be rewarded for continuing such practices. Methods of achieving these objectives would be as follows:

(a) For farms which had in 1935 a lower ratio of soil conserving crops to all rotated crop land than the average for the county, the soil conserving base would be the actual acreage of such crops on the farm at that time, with such modifications as are necessary to provide for unusual circumstances which may affect individual producers.

(b) For farms which had in 1935 as high or higher ratio of soil conserving crops to all rotated crop land than the average for the county, the base for soil conserving crops on the farm would be the county average.

(c) Payments would be made to each farmer in Group A (those who had a smaller percentage of their crop land devoted to soil improving crops than the average for the county), for devoting such percentage of his total rotated crop land, in addition to his soil conserving base, to soil conserving crops as may be necessary, in the aggregate, to bring about the desired adjustment in the region. Individual producers would be allowed a range above and below this percentage.

Payments would be made to each farmer in Group B (those who had a percentage of their crop land devoted to soil improving crops equal to or greater than the average for the county), for each acre above the soil conserving base on his farm up to a percentage of the total rotated crop land in his farm which represents the percentage that has been determined, in the aggregate, to bring about the desired adjustment in the region.

Soon it will be discovered that soil improvement is too narrow a basis for the rain of benefit checks. Corn is a soil depleting crop; but the dairyman who places his corn crop in a silo and feeds it out, hauling the manure to the fields, is really following a soil improving practice. To be on a fair basis with his brother farmer who has no cows the dairyman should be paid for hauling the manure to his fields. His alternative is to sell off some of his cows and seed his cornfield to grass, the change from corn to grass entitling him to the benefit payment under the prospective plan. Will the benefit payment make up for the cut in his monthly milk check from the creamery?

Hog and cattle feeders will receive no benefits, and will be worse than penalized by the contemplated processing tax.

Assuming that the program can be continued for a number of years to bring the soils up to a high degree of fertility, what will be done with the heavier crops grown on the improved soil?

An individual farmer who has for years been practicing proper rotation is to be paid for continuing to do what he has already been doing from enlightened self-interest. What moral justification is there for paying a man to follow a course that is profitable to him?

Investigation of the operations of the Canadian Wheat Board, that was postponed, it is now announced will be made by a parliamentary com'te. Former Prime Minister Bennett is now demanding information about purchases, sales and exports by the new board.

Tribute wrung from American farmers and consumers by racketeers is estimated to total more than \$1,000,000,000 yearly, Stanley F. Morse, executive vice-president of the Farmers' Independence Council of America, asserted recently. "Our farmers are constantly being told that government should do certain things for them. Why do they not demand that Washington start by wiping out all rackets and that it desist from policies which saddle excessive labor charges on the public?"

Fire Losses for 33 Years

If every owner of a grain elevator or mill was familiar with the known causes of fires we are confident all would exercise greater vigilance in preventing fires in their plants, as well as in providing fire extinguishers and water barrels and buckets for extinguishing fires in their incipency.

According to the Grain Dealers National Mutual Fire Insurance Co., 143 fires occurred in the plants of its policyholders during 1935, causing a loss of \$238,214. The causes of 51 of these fires were unknown, the causes of other 92 fires were credited 38 to electrical hazards, 10 to exposure, 9 to lightning, 9 to flues and stoves, 6 to friction, 5 to explosions in buildings, 2 to locomotive sparks, 1 to incendiary, 1 to spontaneous combustion and 11 to miscellaneous causes.

Fifty-five of these fires occurred at night, causing a loss of \$147,692, while the 88 day-light fires caused a loss of only \$90,522.

The kind of power used in 12 of the plants was steam, 17 internal combustion engines and 101 electrical. Thirty-five of the fires resulted in total losses aggregating \$189,470, while the 94 partial losses amounted to only \$48,744.

During the 33 years the company has been specializing in country grain elevators its elevator and mill policyholders have suffered 3,114 fires causing losses aggregating \$6,503,613. During this period 18.7% of all fires were extinguished by the use of water barrels and buckets and fire extinguishers. The amount of insurance in force on the property saved was \$6,404,167, but the total value was much greater. The total losses prevented last year numbered 108 and altho the amount at risk aggregated \$898,191 the loss amounted to only \$48,744. These fires were extinguished by barrels and buckets, 16; hand extinguishers, 15; automatic sprinklers, 2; volunteer fire department, 6; regular fire department, 23; other means, 46.

The company's fire losses during its 33 years' experience were credited to the following causes:

Cause	Number	Loss
Automobile and motor trucks....	5	\$ 5,817.14
Cob burners and cob houses....	24	91,539.97
Electrical hazard	302	131,455.57
Explosions in building	41	59,780.39
Exposure	233	262,565.12
Flues and stoves	134	225,505.23
Friction	350	112,421.94
Grain drier	16	21,962.79
Incendiary	67	204,834.06
Lighting, other than electric....	14	31,994.74
Lightning	490	511,873.16
Locomotive sparks	184	436,676.06
Sparks, other than locomotive....	20	56,023.49
Matches, other than smoking ..	38	56,823.31
Internal combustion engines; power house and power, other than electric	198	377,562.78
Railroad accident	2	4,508.96
Spontaneous ignition	121	139,708.56
Tramps	19	58,299.95
Unknown	775	3,052,583.44
Miscellaneous known causes....	81	61,687.30
Total	3,114	\$6,503,613.96

Winter sowings of wheat for the 1936 harvest in the Danube Basin, including Rumania, Yugoslavia, Hungary, and Bulgaria, totaled 19,000,000 acres, according to a report to the Bureau of Agricultural Economics from Agricultural Attache L. G. Michael in Belgrade. This is a reduction of 5 percent compared with the record winter acreage planted last season but it is only slightly below the average.

"How Henry Wallace can keep a straight face as he sanctimoniously announces the latest Tugwell-Farley plot to collectivize and Tammanyize the farmers of America is hard to understand," said Stanley F. Morse, executive vice-president of the Farmers' Independence Council of America in a blistering attack on the administration's new farm program. "Wallace thus reveals again his utter inability to gauge the intelligence of the American farmer."

Clean Up for the Corn Borer

The corn borer finds its congenial home in the province of Ontario where the summer climatic conditions are about as favorable for the insect as in the states bordering the Great Lakes.

Professor L. Caesar, provincial entomologist, of Guelph, reports that in 1934 the borer decreased greatly in numbers almost all over the province from what it had been in 1933 and yet that in spite of the decrease in 1934 it increased again in 1935 to almost as high a figure as it had been in 1933. Similar fluctuations have taken place on previous occasions since the borer became established in the province. At first the causes of these decreases and increases were not understood, but as a result of study and observation we now know that they are caused by the sort of weather which happens to prevail in June and July. If the weather in these two months in any particular year is hot and very dry we get a decrease in the number of borers that year. If it is moist and fairly warm, or in other words ideal for growth, we get an increase.

The other great factor which determines the increase or decrease of the insect from year to year is the amount of corn refuse—stalks, stubble, etc.—left lying above ground from the previous year. These corn remnants contain over 95% of all the borers that overwintered and that produce the moths which lay eggs on the succeeding crop.

Man has no control over the weather, but he has control over the amount of corn remnants on his property and by plowing under or gathering up and burning all the stalks and other corn remnants which he cannot ensile or feed, he can destroy at least 75% of all the borers that wintered. In this way in years unfavorable to the borer farmers can, if they all act together, greatly increase the reduction of the insects, and in years very favorable to it greatly lessen the amount of increase, though in a very favorable year to the borer, such as 1935 was, no clean-up is capable of preventing an increase. That the clean-up does help greatly in lessening the increase is shown by the fact that the borers last fall were nearly twice as numerous in Prince Edward and Lennox and Addington, where there was no Corn Borer Act in force, as in any county inspected under the Act.

What then about 1936? In the first place the increase in 1935 means that there will be a larger number of borers present this spring than usual. In the second place there

is a good chance that we shall have another moist, warm June and July. If so, the increase this year will be very large unless the farmers do a good job in cleaning up this spring. A great increase now would discourage a large number of farmers and cause many to cease growing corn, though they know that corn often is the salvation of livestock in years when hay and pasture are poor. I therefore urge every grower voluntarily to clean up his own corn field and all corn remnants in any other part of his farm and to urge his neighbors to do likewise. It should not be necessary for them to wait until the inspectors make them clean-up. The Corn Borer Act was passed solely to save the corn industry. It has succeeded so far in doing so. Every farmer, therefore, should feel morally bound to support it and to make the work of the inspectors as easy as possible.

The Rural Resettlement Administration has paid out \$14,274,950 in salaries to bureaucrats and administrative costs, out of a total of \$45,916,000 expended up to Feb. 29, and actually only \$24,252,878 on what is euphemistically described as rural rehabilitation.

Dry Kaffir in West Africa

When the Dark Continent gets well started in the growing of grain, it will easily produce enough to satisfy the needs of all European importers. South Africa has been a wheat importing country until quite recently, but now it reports a crop in excess of twenty million bushels, or double its domestic needs.

West Africa is backward in departing from primeval methods, so seldom produces enough grain to feed the hungry.

On the outside front cover of this number is shown the best grain drier known to the growers of kaffir corn in that section of the world. Being home made, it is not expensive to construct. Its walls, being constructed of broken trees and grasses, provides free ventilation and holds the corn out of reach of the goats and fowls.

After the kaffir heads are well dried, they are spread on the ground and a gang of threshermen with long flails, turned loose. After the corn is all shelled, it is stored in bags until needed. Some is ground between stones and used in making an unpalatable bread. However, no one places a tax on the processing of the kaffir or bribes the growers to reduce the acreage planted. Every farmer is free to plant just as much or just as little as he chooses, without interference from any source.



West African Threshermen About to Separate the Kaffir
[See Outside Front Cover]

Letters from the Trade

[The grain dealers' forum for the discussion of grain trade problems, practices and needed reforms or improvements. When you have anything to say of interest to members of the grain trade, send it to the Journals for publication.]

Sealed Corn in Bad Condition

Grain & Feed Journals: Professor F. E. Robbins, of Purdue University, who is a licensed grain inspector, was in my office Mar. 16 and gave me some interesting information on the outcome of some tests he had recently made of corn in cribs which had been sealed by the government and on which loans had been advanced.

Thirty samples have been tested by him and they came from territory generally in the northern part of the state where the corn was of better grade than the average for the entire state.

One sample graded No. 2, 1 sample was No. 3, 13 samples graded No. 4, 13 samples graded No. 5, and 2 were sample grade.

Professor Robbins stated that the government had permitted those having sealed corn in bins to break the seal and obtain samples for testing purposes. Also, the opportunity was being given the owner to sell the corn now, if its condition necessitated that action.

Some of the samples sent in tight containers were mouldy upon arrival at the laboratory.

From the above tests it appears that a large amount of the corn coming out of the government sealed cribs, as well as other cribs on the farm, is apparently going to be in bad shape and of low grade when put on the market.

It behooves every grain dealer to make thorough tests on purchases of corn from now on. By all means, buy this corn on its own merits, and at a price which will assure you a fair margin of profit.

Another paramount question which confronts you directly is, where are you going to find an outlet to sell this low grade corn? You had better be sure that you have an outlet before you buy this wet corn, otherwise you stand a good chance this year to lose heavily in handling the corn crop which is still on the farms.—Fred K. Sale, sec'y Indiana Grain Dealers Ass'n, Indianapolis, Ind.

Conditions in Eastern Iowa

Grain Dealers Journal: The movement of grain during the past two or three months has been very light, due to snow blocked roads. Banks of snow along the highways are still melting and softening the road beds till they are absolutely impassable for any kind of vehicle. The main roads are embargoed except for light cars.

The extreme cold weather has kept cattle and hogs on farms longer than their owners had planned and consumption of corn has been heavier than usual, however, there is plenty of corn that will have to find a new home, when roads permit deliveries.

Farmers are holding oats for 30 cents in the country, consequently not many oats being moved. This vicinity is loaded with timothy seed, market slow for it, result, a lot of dissatisfied holders, all blaming the grain man.

Seed corn is testing very unsatisfactorily, many farmers are finding that they are entirely without seed. If the seed was not stored in freeze proof buildings, most ears are either very weak or entirely dead. The extreme cold weather in November killed most of the germs, even if the corn had been picked from the field and hung in drive-ways.—Buttolph Grain Co., Bennett, Ia.

Restricted on their own acreage some corn-hog farmers are said to be planting corn on railroad rights of way, to circumvent the A.A.A.

From Abroad

China's wheat crop is estimated at 429,152,000 bus., against 443,369,000 in 1934.

Belgium has released millers from the requirement that 10 per cent of domestic wheat be used in milling mixtures.

Switzerland imported 8,300,000 bus. of wheat during the six months prior to Feb. 1, against 9,096,000 bus. during the like period of 1934-35.

The Argentine Grain Board was authorized Mar. 22 to buy a quantity of corn of the 1935-36 harvest at an increase of 11 cents to \$1.60 per 220 pounds.

Italy has seized the entire wheat production of the country. All wheat must go into government warehouses; and millers are prohibited from receiving grain from any other source.

The Portuguese Wheat Federation was authorized to export 300,000 tons of wheat, in an effort to reduce the existing wheat surplus, by decree law No. 26276, published in the *Diario do Governo*, Lisbon.

Rumors that the Argentine government would sell flaxseed at lower than the minimum fixed price are unfounded, according to Broomhall's agent, the government having no linseed on hand.

The total 1936 spring grain acreage of the Soviet Union is fixed at a level not differing materially from that of 1935, but an increase of 6 per cent is provided for in the case of spring wheat and spring barley as compared with the 1935 plan.

Price Stabilization of rice and corn will be attempted by the Philippine government thru a corporation that Pres. Manuel Quezon authorized Mar. 16 as subsidiary of the national development company, with a capital of \$2,000,000.

The 1935 rice crop of China is estimated at 41,500,000 short tons of cleaned rice compared with 36,400,000 tons in 1934-35 and an average crop of 43,000,000 tons, according to a report from Assistant Agricultural Commissioner F. J. Rossiter at Shanghai.

The 1936 corn crop in Argentina was seriously damaged by drouth, high temperature, and strong winds during January and February, according to a report to the Bureau of Agricultural Economics from Agricultural Attache P. O. Nyhus in Buenos Aires. Damage by locusts also has been heavy in some areas. As a result the crop will probably be no larger and possibly somewhat smaller than in 1935, when it reached an all-time record of 451,943,000 bus.

Offhand it would seem that the approach of the new crop and of the May delivery would tend to bring together the prices for old crop and new crop futures, either thru declines in the May because of liquidation or advances in the July and September based on apprehension over new crop conditions. An examination of price records of the past ten years, however, indicates that such is not the case. Nor as the market moves into the May delivery period is there much more of a tendency for the differences to narrow. Rather there appears to be a definite tendency for May and July to hold their relative differences throughout the two months from Mar. 20 to April 20 and then to May 20.—John H. Pitt of Thomson & McKinnon.

Coming Conventions

Trade conventions are always worth while, as they afford live, progressive grain dealers a chance to meet other merchants from the same industry. You can not afford to pass up these opportunities to cultivate friendly relations and profit by the experience and study of others.

Apr. 22, 23. Western Grain & Feed Dealers Ass'n, Sioux City, Ia.

Apr. 23, 24, 25. California Hay, Grain & Feed Dealers Ass'n at the Biltmore Hotel, Los Angeles, Cal.

Apr. 25. Western Seedsmen's Ass'n, Fontenelle Hotel, Omaha, Neb.

May 8. Oregon Feed Dealers Ass'n at Multnomah Hotel, Portland, Ore.

May 14, 15. Illinois Grain Dealers Ass'n, Hotel Jefferson, Peoria, Ill.

May 24. National Farmers Co-op. Elevtr. Ass'n, Hotel Fontenelle, Omaha, Neb.

May 26, 27. Kansas Grain Dealers Ass'n, Dodge City, Kan.

June 1, 2. Pacific States Seedsmen's Ass'n, Hotel Del Monte, Del Monte, Cal.

June 1, 5. American Ass'n of Cereal Chemists, Adolphus Hotel, Dallas, Tex.

June 8, 9. Central Retail Feed Ass'n, Schroeder Hotel, Milwaukee, Wis.

June 11, 12. American Feed Manufacturers Ass'n, Greenbrier Hotel, White Sulphur Springs, W. Va.

June 12, 13, 14 and 15. Society of Grain Elevator Superintendents of North America, at Duluth June 12 and 13, and at Minneapolis evening of June 13, and June 14 and 15.

June 16-17. Northwest Retail Feed Ass'n, West Hotel, Minneapolis.

June 22. New York State Seed Ass'n at Syracuse, N. Y.

June 22, 23. Ohio Grain, Mill & Feed Dealers Ass'n, Cedar Point, O.

June 25, 26, 27. Southern Seedsmen's Ass'n at Dallas, Tex.

June 29. Farm Seed Group of A. S. T. A. at Dallas, Tex.

June 29, 30 and July 1. American Seed Trade Ass'n at Dallas, Tex.

Oct. 12, 13. Grain and Feed Dealers National Ass'n at Hotel Schroeder, Milwaukee, Wis.

Grain is moving more briskly from the Great Lakes elevators to storage at the Port of Saint John this year than last, according to the official figures, and shipments from this port are running from 30 to 40 percent ahead of last season.

New Outlets for Soy Beans

Merchants on the Chicago Board of Trade found new outlets for soy beans in 1935 and, as a result of their efforts, the record American crop of more than 39 million bushels last year returned an average of 73½ cents per bushel on the farm.

This is established by a study of exports, prepared by the U. S. Department of Agriculture, and the shipments of soy beans by lake from Chicago.

Department of Agriculture reports now available show that in the United States 1,569,850 bus. of soy beans were inspected for export between July 1, 1935, and Feb. 29, 1936. In comparison, records of the Board of Trade list shipments of soy beans in 19 vessels out of Chicago which totaled 1,558,000 bus. between Oct. 26, 1935, and Nov. 26.

"Exporters of soy beans had to come to Chicago in 1935 because we had opened new channels of trade and the market was here," explained a member of the Board of Trade who made the first shipment for export on Oct. 26 last year when the Barrie steamed out of Chicago for Montreal with a cargo of 70,000 bus. of soy beans.

Michigan Elevators Need Better Business Practices

By BRUCE A. STICKLE

The Michigan bean business is "going to pot on a sleigh ride." The \$5,000,000 worth of property and equipment invested in bean handling elevators in Michigan was worth 15 years ago on an earning basis a full 100 cents on the dollar. Today you can buy these same properties for less than 50 cents using the 59-cent dollar. If the trend of things continues as it has been during the last five years, it will soon be almost impossible even to give away an elevator and have someone else assume the responsibility of operating same, let alone being able to dispose of elevator property for even a fair percentage of its physical appraisal value.

Are we going to allow this fine business to become worthless, both to the distributors and to the producers? Or are we going to make a few simple changes in our policy of handling Michigan beans to put our industry back on a paying basis to both growers and shippers?

If elevators are not equipped to hand pick, they should be forced to sell their beans to neighboring or terminal elevators which have hand-picking facilities.

Not a single bag of beans should be allowed to leave the state unless it would grade either choice hand-picked or prime pea beans. Any sample of beans which could not be made into one of these grades should be sold for hog feed or ground up for use in mixed feed or simply thrown away—surely never shipped to the trade for human consumption.

How did the Michigan bean business ever get into its present unhealthy condition? I think this can be traced directly to the policies of improper buying from growers at the country elevators. Inadequate margins, under-picking, trucking free and all of the other tricks and gadgets which have crept into the bean business have increased the cost so greatly that elevators have cut the quality and misrepresented and camouflaged the quality in the eyes of the trade in every possible unbusinesslike, unconstructive manner that they possibly can in their endeavor to make a margin at the expense of the integrity of the Michigan bean business. This thing has gone the limit and it must be stopped.

Probably the most damaging feature of our business lowering the price of Michigan beans is the one of quality, particularly the low grades and the fact that we have so many grades. I would place second this matter of carrying consignments in many markets and the fact that when consignments are made it is usually customary to ship as poor a grade as possible, thinking thereby that the additional expense which occurs in the consigning of beans will be offset by difference in value. If you will analyze in your own mind why consignments are made, I am positive you will reach the same conclusion that I have, that the consigning of beans would be eliminated if it was necessary for the individual firms to put their good money into the beans which they consigned.

In order to correct the Michigan bean business so it is profitable from both the growers' and elevators' standpoint and in order to advance the price of Michigan beans as compared with higher prices obtained for white beans grown in other states, that several things must be done at the earliest possible moment, some

by association regulation and some by state legislation and administration.

First—We must have not more than two grades of beans moving out of the state of Michigan.

Second—These beans must be officially graded.

Third—The bags or containers must specify the quality of the contents.

Fourth—Adequate storage laws and policing facilities must be provided.

Increased Grain Activity Indicated

The record of the volume of trade in contracts for future delivery on the Chicago Board of Trade for the past decade indicates an impending revival of activity in the commodity markets.

The total volume of futures trade in all grains in the Chicago market from Jan. 1, 1926, until Jan. 1 of this year is approximately 151 billion bushels, according to the United States Department of Agriculture. Of this total, the department shows, approximately 14 billion bus., or more than 9 per cent, were traded in the month of April, a period in which uncertainty over what the new winter wheat crop will produce is apt to prevail.

In effect, then, an analysis of the statistics of trade show that investment support of sufficient buying strength to finance the entire wheat movement has been available in this market in each April of the ten-year period to which the statistics apply.

The favorable activity shown by April in comparison with other months is regarded in trade circles as an encouraging omen for the immediate future. Markets have been more or less inactive recently as traders followed a custom of remaining on the sidelines during the final two winter months of January and February.

The general level of prices received by farmers has declined recently, owing chiefly to reduced prices on hogs, dairy products, eggs, and cotton, according to the Bureau of Agricultural Economics on the farm price situation issued Mar. 16. Grain prices have tended slightly higher.

Malt and Barley Elevator

Besides some barley grown in Lower California, the Mexican Malt Co., of Tecate, in that province of Old Mexico, imports barley from Wisconsin, Czechoslovakia, California and Chile, to store which it became necessary to construct bins as an addition to the original plant, so that the malting process might proceed in an orderly manner.

The six new steel bins have conical bottoms and are mounted on steel supports 14 ft. above the ground. They are 24 ft. in diameter and 40 ft. high, each holding 16,650 bus.

From the top floor of the malt house barley or malt is delivered by a helicoid screw conveyor to the bins. In the bottom of the conveyor are hand operated discharge gates opening into 2-way spouts to the bins.

A similar 12-in. horizontal screw conveyor below the bins is located at the center line between the three pairs of bins, and conveys grain or malt discharged thru hand-operated gates and circular spouts from the bins into the boot of a bucket elevator leg in the main building.

Approximately 60 per cent of the company's malt output is distributed to breweries in Mexico and the remainder to California. About one-half of the output of mixed feed goes to dairies at Tijuana. The remainder and all the malt sprouts are shipped to California.

The bins were constructed by the Chicago Bridge & Iron Works, and the screw conveyors were supplied by the Link-Belt Co.

At this writing political affairs are a little mixed—

most everywhere. Some war talk by fiery leaders in Europe — would-be Napoleons — give them plenty of rope. We're a Democracy—a Republic—with no swash-bucklers seeking "a place in the sun". Our problems are economic—we'll solve them—in the form of public opinion. Oratory is cheaper than war. We love the ways of peace—but—let no one ever get the notion—that we won't fight.

LOWELL HOIT & CO.

Albany, N. Y.—No referendum on collecting tolls on the barge canal will be held, the assembly voting only 73 in favor, while 76 affirmative votes were required.

Want Cut Rates on Corn to Meet Truck Competition

The standing rate com'ite of the Western Trunk Lines held a conference at the Union Station, Chicago, Mar. 18, with representatives of the Missouri River markets to consider a request for a reduction of 6½ cents on corn from Iowa, Southeastern South Dakota and Northeastern Nebraska to the feeding area south, with transit.

Following the shippers meeting at Kansas City some time ago the carriers had considered a 4-cent reduction. W. R. Scott, representing the Kansas City Board of Trade and the St. Joseph Grain Exchange, said this was not enough.

It was stated that about 100 carloads a day are moving by truck to feeders in Southwestern Missouri, Nebraska and Kansas. The desired rates would reach Coffeyville, Higginsville and Joplin as representative points.

The standing rate com'ite will report to the general freight agents and they in turn to the executive com'ite.

It is feared that so many other grains and products will be involved that action will be delayed.

J. S. Brown represented the Chicago Board of Trade and Freeman Bradford the Sioux City Grain Exchange.



Malt and Barley Elevator at Tecate, Old Mexico

Crop Reports

Reports on the acreage, condition and yield of grain and field seeds, as well as on the movement to country markets, are always welcome.

Center, Colo., Mar. 20.—Present indications are about the same acreage of spring wheat as last year. Going in in good condition.—Center Elevator.

Des Moines, Ia., Mar. 1.—Increases in harvested acreage of corn, winter wheat and oats are in prospect this year in Iowa, and decreases in other grain crops, hay and soybeans.

Jonesboro, Tenn., Mar. 20.—There hasn't been any grain plowed under here. I think there is a good prospect for a new crop of wheat, about the same acreage as last year. Have had plenty of snow.—J. C. Ward.

Chicago, Ill.—The percentage of corn receipts grading lower than No. 3 was abnormally high during the period Feb. 16 to 29, 1936, caused principally by the factor "moisture content."—Grain Division, Bureau of Agricultural Economics.

Spokane, Wash.—Farmers in southeastern Spokane County will have to re-seed most of their wheat because of a most unfavorable fall and winter. Conditions were such that the wheat did not get started, and it also fared poorly thru the winter.—F. K. H.

Fargo, N. D.—North Dakota's acreage of the principal spring crop is expected to total approximately 17,984,000, an increase of 12% over the acreage of these same crops harvested in 1935, and 2½% over the five-year average (1928-1932).—Ben Kienholz, Ag. Stat.

New England, N. D., Mar. 14.—I think we will have a big increase in acreage of wheat this spring, as it seems with the amount of snow we have there will be plenty of moisture. It will be a few weeks yet before any seeding is done.—Joe F. Sondag, mgr., Bagley Elevtr. Co.

Evansville, Ind.—Mar. 18.—Wheat along the lower Ohio River on both the Indiana and Kentucky sides is looking very good. A great many fields were covered by flood waters during January and February, but it is not believed the growing wheat suffered to any great extent.—W. B. C.

Temple, Okla., Mar. 20.—Wheat acreage 100% of last year; growing condition 100%. Top soil very dry, need rain badly. None plowed up. Oats 70% up to stand, 30% will have to have rain to germinate. Acreage 80% of last year. High winds doing no damage so far, depleting moisture.—Farmers Elevator.

Winnipeg, Man., Mar. 19.—The estimate of the grain crop, returns being received from elevator agents at 95% of country points in the three Prairie Provinces, is as follows: Spring wheat 241,516,900 bus., durum wheat 13,149,200, oats 202,858,800, barley 65,772,300, rye 8,126,500, flax 1,605,900.—J. G. Fraser mgr., North-West Grain Dealers Ass'n.

Poseyville, Ind., Mar. 18.—The condition of winter wheat in Posey County at this time is only fair. The fields going into the winter with vigor, have come thru with little injury from the extreme cold weather that prevailed. On the other hand, fields that went into the winter with low vigor and with injury from the Hessian fly show little promise.—W. B. C.

Momence, Ill., Mar. 16.—Seed corn and seed oats of good quality are worries for the farmers this year. Farmers are getting excited over whether their corn is good enough to plant, and are running germination tests. Available oats, testing from 17 to 26 lbs. per bu., are expected to grow if they are sown heavily enough.—M. C. Hobart, Smith & Hobart.

Spearman, Tex., Mar. 19.—Following the same route I traveled last December, found wheat Dodge City to Plains, Kan., 50 miles, fair to good. Then 130 miles from Plains thru Oklahoma Panhandle to here found one-fourth fair to good, nearly one-half completely dead and the remainder sickly and spindly and needing rain. Many farmers have plowed ridges thru doubtful, dust blown fields absolutely kill-

ing from 10 to 20% of the crop such as it is in these fields. Rain badly wanted for poor growth fields to permit spring stooling, which is backward.—H. C. Donovan, of Thomson & McKinnon.

Decatur, Ill., Mar. 21.—A few oats were seeded this week. The oat acreage will be practically the same as last year. Oat prices are now below the price paid at harvest time, and there is no improvement in the demand. Soybeans marking time. Producers are slow about moving the beans carried over. With meal and oil prices declining, processors are not anxious buyers.—Baldwin Elevator Co.

Washington, D. C., Mar. 20.—An increase of more than 2,000,000 acres in spring wheat this season, as compared with the 1928-32 average harvested area, is shown by the detailed department of agriculture report giving farmers' intentions to plant. The reported acreage has been adjusted to show the area that would be harvested in 1936 if the relations between growers' intentions and harvested acreages are similar to those in the past.

Kansas City, Mo., Mar. 12.—It is too early to venture a guess on the final outcome of the 1936 crop, but with anything like normal weather, and should rain develop before we get wind damage, we believe Kansas can raise a good crop on at least 10,000,000 acres with some additional production on the balance of about 4,000,000 acres. On this 4,000,000 acres some damage from blowing has already occurred and considerable seed has only sprouted so it needs relief soon, or it is again facing disaster.—The Robinson Elevator Co.

Minneapolis, Minn., Mar. 7.—In California flax is now in bloom. The crop is reported to be about thirty days earlier than last season. Favorable progress has been made during the past month, altho damage was reported in the central part of the state, where some abandonment of flax acreage is anticipated in low lying areas because of recent heavy rains. The area seeded in the Imperial Valley is now estimated at around 18,000 to 19,000 acres, which is somewhat under earlier estimates and about 6,000 acres less than the areas harvested last season. Reports indicate that total yields may be somewhat larger than last season, in spite of the reduction in acreage.—Archer-Daniels-Midland Co.

Portland, Ore.—George V. Hayes, managing agent of the North Pacific Emergency Export Ass'n, who has been in Washington, D. C., for several months, has returned, after pressing claims of the ass'n against the government. Claims involving commissions in connection with wheat sales in China have been settled.—F. K. H.

Grain Movement

Reports on the movement of grain from farm to country elevator and movement from interior points are always welcome.

Duluth, Minn.—A fair steady country run of Canadian durum wheat is going thru here for Minneapolis.—F. G. C.

San Francisco, Cal.—February receipts of grain were: Wheat, 3,060 tons; barley 16,325; oats, 160; corn, 200, compared with wheat, 5,040 tons; barley 11,502; oats 180, in February, 1935.

Winnipeg, Man., Mar. 19.—Estimated by country elevator agents in farmers' hands to market: Oats 11,640,000 bus., barley 4,326,000, rye 798,000, flax 139,000.—J. G. Fraser, mgr., North-West Grain Dealers Ass'n.

Ottawa, Ont.—Quantities of grain in store in country elevators in the three Prairie Provinces on Feb. 28, 1936, were as follows: Wheat, 83,160,810 bus.; oats, 5,115,349; barley, 3,376,964; flaxseed, 361,873; rye, 1,181,672.—R. H. Coats, Dominion statistician.

Minneapolis, Minn., Mar. 7.—In the United States 170,000 bus. of domestic flaxseed was marketed during the month of February, bringing total sales for this crop to 11,700,000 bus. From now until next autumn the amounts of flaxseed reaching Minneapolis and Duluth will be negligible.—Archer-Daniels-Midland Co.

Ft. William, Ont., Mar. 13.—A substantial movement of durum wheat direct from Western Canada to points immediately south of the boundary in the U. S. A. is now in full swing. During February the railways report 331,535 bus. and since then at least 150,000 bus. more have been shipped, principally from Manitoba points.—E. A. Ursell, statistician.

New York, N. Y.—February receipts of grain were: Wheat 1,711,900 bus., corn 25,500, oats 43,200, rye 1,700, flaxseed 250,060, against wheat 459,000 bus., corn 247,000, oats 784,095, rye 1,700, flaxseed 570,000 in February, 1935. Shipments during the same period were: Wheat 1,935,000 bus., oats 111,000, against wheat 1,108,000 bus. in February, 1935.—Produce Exchange, dept. of information and stats.

Boston, Mass.—A shipment of 773 bags of wheat feed flour was brot from Boston to Buenos Aires on the steamer West Selene, weighing 110,265 lbs. Hungarian malt continues to come to Boston, a shipment of 1,849 bags arriving here on the steamer Isis from Hamburg.

Daily Closing Prices

The daily closing prices for wheat, corn, oats, rye and barley for May delivery at the following markets for the past two weeks have been as follows:

	Option		Wheat													
	High	Low	Mar. 11	Mar. 12	Mar. 13	Mar. 14	Mar. 16	Mar. 17	Mar. 18	Mar. 19	Mar. 20	Mar. 21	Mar. 23	Mar. 24		
Chicago	107	88½	99½	100%	101	99¾	99	98¾	97¾	98%	97¾	97	97½			
Winnipeg	102½	82¼	84½	85½	86	85¼	84½	83¾	83%	83¼	83½	82½	82½			
Liverpool*	96%	80½	91¾	92%	92½	92½	91	90%	90%	91	90	89½	...			
Kansas City	108½	88½	97¾	98¼	99¾	97¾	97¾	97¼	97½	98	97¾	97	95¾	96¼		
Minneapolis	125½	99¾	107¼	108%	108¾	107½	106¾	106¾	105¾	106¼	105	104¾	103	103¼		
Duluth, durum	105½	88½	98¾	100	100¼	99¾	98¾	97¾	97¼	96¾	95	94¾	93	92¾		
Milwaukee	106¾	89½	99%	100%	101¼	99¾	99¾	98¾	97¾	98%	97½	97¾	97½	....	
			Corn													
Chicago	67%	56	60%	60%	60%	60%	60%	60½	60¼	60¼	59%	59	58¼	58%		
Kansas City	62%	56¼	60%	61½	61%	60%	60%	60¾	60½	60%	60	59½	58½	58%		
Milwaukee	66%	56%	60%	60%	60%	60%	60½	60¾	60¼	60¼	59½	59	58%	....	
			Oats													
Chicago	37½	25¼	27½	27½	27¾	27%	26½	26½	26¼	25½	25½	25%	25%	25½		
Winnipeg	35%	29%	32%	32%	32¾	32%	32¼	32	31¾	31¾	31¼	31	30¾	30%		
Minneapolis	29½	23½	25¼	25%	25%	25½	25¼	25	24½	24¼	23¾	23½	23½	23%		
Milwaukee	37¼	25¼	27	27%	27%	27%	26%	26¾	26¼	25%	25%	25%	25¼	...		
			Rye													
Chicago	59	45	56¼	56¾	57¼	56%	56%	56¼	55¾	55¾	55½	55%	54	53		
Minneapolis	59	42½	50½	51¼	51½	50%	50¾	50¾	49¾	49%	48¾	48%	47¾	46¾		
Winnipeg	53	41¼	45½	46	46	45%	45¾	45¾	44¾	45%	44%	44¾	44¾	44		
Duluth	58½	46%	51%	52	52½	52¼	52½	52½	51½	51½	51	50	49½	48%		
			Barley													
Minneapolis	40%	33%	36%	37%	37¼	36%	36¼	36¼	35%	35½	35¼	34%	33%	34%		
Winnipeg	42½	34%	39%	39%	39½	39¼	38%	38½	38%	39	38½	38½	38¼	38%		

*At daily current rate of exchange.

Exporting 500 bags of cottonseed meal from Boston to New Brunswick, the steamer Yarmouth sailed for St. John. The shipment weighed 50,000 lbs.—L. V. S.

Decatur, Ill., Mar. 21.—Corn movement this week consisted principally of high moisture, heavy damage that producers felt could not be carried into spring months without risk of heavy loss due to the corn getting out of condition in cribs with warm weather. Industries are pretty well congested with the poor quality corn and discounts are widening. Farmers who have good quality corn are not inclined to offer it at present prices.—Baldwin Elevator Co.

Cincinnati, O.—February receipts of grain were: Wheat 96,000 bus., shelled corn 286,500, oats 124,000, rye 9,800, barley 8,000, compared with wheat 158,400 bus., shelled corn 94,500, oats 82,000, rye 8,400, barley 1,600, in February, 1935. Shipments during the same period were: Wheat 273,600 bus., shelled corn 264,000, oats 48,000, rye 4,200, compared with wheat 240,000 bus., shelled corn 34,500, oats 60,000, rye 2,800, in February, 1935.—John O'Hara, in charge of inspection and weighing, Cincinnati Board of Trade.

Decatur, Ill., Mar. 14.—Country movement of corn has been heavy, and due to such a large percentage of arrivals showing high moisture, driers are all working twenty-four hours a day and from three to five weeks behind. Industries now all have good stocks and are no longer anxious buyers, as with warm weather in sight the trade is not willing to stock up too heavy. Elevators have been loading out their oats, a large percentage of which are poor quality, light test weight, heat damaged and musty.—Baldwin Elevator Co.

St. Louis, Mo.—February receipts of grain were: Wheat, 721,500 bus.; corn, 2,787,300; oats, 478,000; rye, 36,000; barley, 156,800; soybeans, 37,500; compared with wheat, 441,000 bus.; corn, 599,500; oats, 756,000; rye, 19,500; barley, 145,600; soybeans, 25,500, in February, 1935. Shipments during the same period were: Wheat, 679,500 bus.; corn, 943,050; oats, 389,400; rye, 34,500; barley, 44,600; soybeans, 78,500, compared with wheat, 1,307,838 bus.; corn, 117,180; oats, 565,100; rye, 9,100; barley, 33,900; soybeans, 78,500, in February, 1935.—C. B. Rader, sec'y Merchants Exchange.

Ottawa, Ont.—Total receipts of grain at country elevators and platform loadings in the period from Aug. 1, 1935, to Feb. 28, 1936, in the three Prairie Provinces, was as follows: Manitoba, 15,483,464 bus. wheat and 11,641,522 bus. other grain; Saskatchewan, 100,083,738 bus. wheat and 16,950,829 bus. other grain; Alberta, 70,448,779 bus. wheat and 7,903,704 bus. other grain; total, 186,015,981 bus. wheat and 36,496,055 bus. other grain. Totals for the three provinces during the same period of 1934-1935 were 187,104,819 bus. wheat and 40,050,013 bus. other grain.—R. H. Coats, Dominion statistician.

Ottawa, Ont.—Total stocks of grain in different elevators during the week ending Mar. 6, 1936, in western country elevators, interior private and mill elevators, interior public and semi-public terminals, Vancouver-New Westminster, Prince Rupert, Churchill, Ft. William and Port Arthur, eastern elevators (lake, St. Lawrence and seaboard ports), U. S. lake and Atlantic seaboard ports, were as follows: Wheat, 219,250,632 bus.; oats, 11,028,445 bus.; barley, 8,374,993 bus.; flaxseed, 416,563 bus.; rye, 4,684,791 bus. Same week the previous year: Wheat, 239,405,439 bus.; oats, 15,260,874 bus.; barley, 11,316,476 bus.; flaxseed, 408,367 bus.; rye, 3,866,971 bus.—R. H. Coats, Dominion statistician.

Duluth, Minn.—Grain receipts dwindled to a very low level during January, February and part of March, due to the severe wintry weather and heavy snowfall, crippling transportation facilities. With near approach of spring the improved weather and better roads for farm deliveries has stimulated a broader movement to primary markets. Farmers show more willingness to sell and railroads are hauling a larger volume of business. Sample tables are daily loaded with more spot, or hold offerings for inspection by buyers, with the result that sales of grain have picked up considerably. There has been some re-adjustment in cash basis, but so far it has been only of minor importance. Wheat, oats, rye and barley were in best demand for shipping. From Aug. 1, 1935, to Mar. 21, 1936, total domestic receipts in this market reached 47,102,278 bus.; Canadian in bond 2,935,745 bus., against 21,583,327 domes-

tic and foreign 6,283,429 bus. for the corresponding time the previous year. Domestic shipments this year are 35,218,396 bus., against 35,852,436 bus. last year.—F. G. C.

South Africa Takes Advantage of U. S. Acreage Reduction

The 1935-36 wheat crop in the Union of South Africa was an all-time record of 20,209,000 bus, according to a cable to the Foreign Agricultural Service of the Bureau of Agricultural Economics from the International Institute of Agriculture in Rome. Last season the crop was 15,343,000 bus; the annual average for the four years ending 1933-34 was 11,513,000 bus.

During the ten years 1920-21 to 1929-30 the Union produced only 64 per cent of its wheat requirements the crop averaging 7,720,000 bus. and consumption 12,139,000 bus. annually. The remaining 36 per cent was imported mainly from Australia and Canada.

Radio Station WDW Expands

Immeasurable progress has been made in radio broadcasting and reception since Jas. L. Bush established at Tuscola, Ill., the first station for the exclusive broadcasting of grain market information.

Receiving sets of that day were crude and required a head phone. Sending stations had a limited range. Nevertheless Mr. Bush, with well grounded faith, pioneered in building his station and persuading a few elevator operators nearby to install receiving phones.

Clyde E. Wiley, who during the war had directed a number of radio stations sending army information, entered the employ of Mr. Bush after the war, and immediately saw the opportunity to send grain information to country dealers who were customers of Mr. Bush, who represented Lamson Bros. & Co. at Tuscola, with a private wire to the Chicago Board of Trade.

WDZ has never missed a whole day since it started in 1921 to quote the grain and live stock markets every half hour, which is a record of which no other station can boast. For many years it was hampered from getting out where the grain elevators and farmers could get the markets by being hemmed in with WTAM, Cleveland, on 1070 kilocycles with 50,000 watts, Carthage on 1070 with 100 watts, WMBI on 1080 kilocycles with 5,000 watts.

Mr. Bush has just completed the installation of a 250 watt RCA transmitter, a 250 vertical steel radiator and changed to 1020 kilocycles instead of 1070 kilocycles. This gives his grain station a range of over 200 miles on a clear channel. There has been an investment of approximately \$30,000 in new equipment. The tower and transmitter house is located out in the country two miles northeast of Tuscola. The ground system is composed of 100 No. 8 copper wires one foot underground and 300 feet long running in all directions from the center of the tower.

Now WDZ is on a clear channel and the grain trade and farmers should receive it in all the states surrounding Illinois. Winslow, Ill., located on the Ill.-Wis. line and from Quincy, Ill., report a clear strong signal with no interference from any other station. The Owensboro Grain Co., of Owensboro, Ky., and Franklin Elevator & Feed Co., of Franklin, Ky., report receiving the markets from WDZ since it changed over to 1020 kilocycles with the 250 watts power on Mar. 6. They picked WDZ up the very first day just by accident.

It is with justifiable pride in being a real public benefactor that Mr. Bush writes as follows: "It is a pleasure to have these reports from the grain trade as there is no other station in the country that gives out the market news and quotations every half hour from the opening to the close; and it is just fine to have all the commission house customers get them

just as well as my own, so there is nothing discriminatory about the service."

Limitation of Action on Warehouseman's Bond

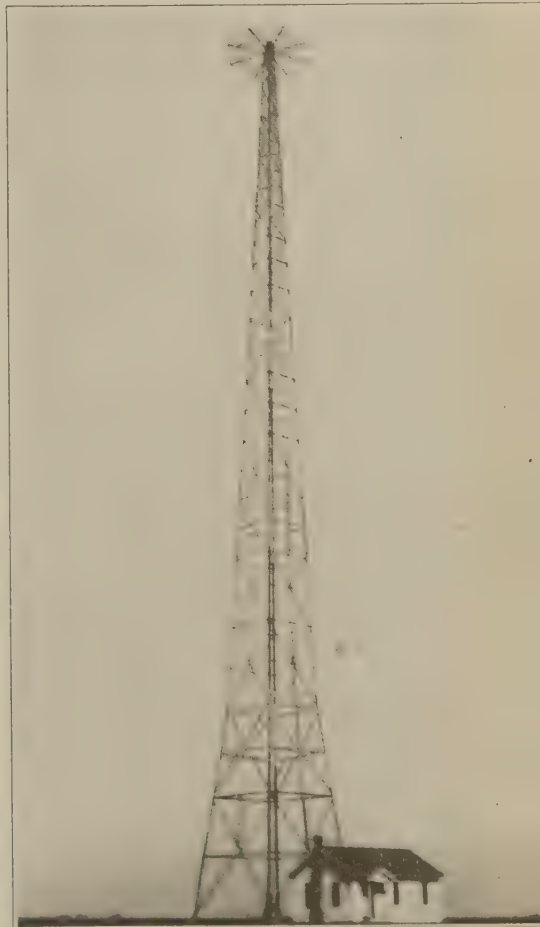
B. D. Shutt left wheat in store with the Farmers Grain & Supply Co. of Lambert, Okla., of which he was president, but received no receipts from the manager, in 1922. In 1923 the company became insolvent and in August paid a 25 per cent dividend to holders of stored wheat, the manager at that time giving him a memorandum showing the amount of wheat which he, his father and his sister still had deposited with the company and for which settlement had not been made. In March, 1925, he demanded his wheat, but knew they could not return it because they did not have it. In April, 1926, a final payment was made him by the receiver of the company.

On Feb. 4, 1930, Shutt, who had been president of the company all this time, had suit brought for his benefit by the state against the signers of the warehouseman's bond.

Defense was that action was barred by the statute of limitations. Section 101, Oklahoma Statutes, provides that suit must be brought within three years on "an action upon a contract express or implied, not in writing."

The Supreme Court of Oklahoma on June 11, 1935, ruled against plaintiff, Shutt, saying: "Plaintiff's cause of action is upon breach of oral contract of bailment, and the warehouseman bond is only collateral security for the enforcement of such cause of action."

"The plaintiff knew as early as August, 1923, that the Farmers Grain & Supply Co. did not have his wheat in storage, that the wheat had been disposed of, that the wheat could not be returned on demand, that he had notice of conversion. His cause of action accrued at the time of said notice. More than six years have elapsed since the cause of action arose."—46 Pac. Rep. 348.



250 Watts WDZ 1020 KC Transmitter Building. Vertical Radiator 250 Feet.

National Scale Men Modify Scale Specifications

Meeting in the 20th annual convention of the National Scale Men's Ass'n in the Sherman Hotel, Chicago, Mar. 9-11, inclusive, over 125 delegates adopted resolutions modifying the specifications on track and motor truck scales, laid plans for increasing the membership thru organization of local affiliates, listened to technical addresses covering the evolution of weighing devices, methods of manufacture, applications of scales in industry, and learned about new scale testing equipment being developed by the scale inspection department of the state of Illinois.

The resolutions on railway track and motor truck scales are consolidated in the following:

WHEREAS, Since establishment of specifications for railway track (or motor truck) scales began, the basic specifications have had to be frequently amended, and

WHEREAS, It has been found expedient to bring these specifications into more compact and up-to-date form, and

WHEREAS, It is considered essential to replace the former specifications for track (or motor truck) scales used in Grain Weighing by incorporation with general railway track (or motor truck) scale specifications, and

WHEREAS, Likewise the specifications for light industrial service track (or motor truck) scales should be incorporated, subject to certain restrictions as outlined, be it therefore

RESOLVED, To accept the form and substance of the specifications for four section, knife edge, railway track (or motor truck) scales as compiled by the scale sub-committee of the American Railway Engineers Ass'n, for revision of the A. R. E. A. manual.

The effect of the revisions referred to in these resolutions is to accept the weights of many scales now in service that did not quite meet the specifications formerly laid down by the A. R. E. A. manual.

J. A. SCHMITZ, Chicago, head of the committee to increase the membership, reported a plan for organizing local meetings for members residing in sections where a sufficient number of scale men are employed to merit organization. He suggested a minimum of 10 bona fide members for each local to be organized, with dues of \$5 for initiation and membership, and \$4 per annum thereafter, the dues of \$4 to be sent to the parent organization, which would rebate \$2 to the local for local expenses. Mr. Schmitz' plan met with instant approval, delegates feeling that the parent organization would suffer no loss in finances, because the plan would double the membership.

NEW OFFICERS elected were: R. O. Rask, Bloomington, Ill., pres.; Harry Mayer, Chicago, Ill., vice-pres.; M. H. Ladd, Milwaukee Grain & Stock Exchange, Milwaukee, Wis., sec'y treas. Executive committee: C. R. Letzkus, Chicago, chairman; A. D. MacRitchie, Toronto, Can.; H. M. Batcheller, Minneapolis, Minn.; J. H. Opfer, Elkhart, Ind. Sergeant-at-Arms: J. J. Cunningham, Scale Inspector, Kansas State Grain Inspection Department, Kansas City, Mo.

R. O. RASK, the new pres., is given credit as the father of the idea now being worked out for adequate testing of motor truck scales, as presented by J. J. Levitt, superintendent of standards, department of weights and measures, State of Illinois, Springfield. Mr. Levitt carried blue-prints to illustrate the equipment which has been designed for this purpose. Said Mr. Levitt:

NEW SCALE TESTING EQUIPMENT

"For many years the weights and measures department of Illinois has considered 1,500 lbs. of test weights as sufficient for testing the tolerance of motor truck and wagon scales thru the state. But about two years ago, at the suggestion of Mr. Rask, we started investigations within a range of 100 miles of Springfield,

checking more than 200 scales at coal mines, industries and grain elevators.

"The procedure employed was to make the customary test for tolerance with 1,500 lbs. of test weights, making a record of the results. Then we tested with a gross load equal to one-fourth the capacity of the scale, and recorded the results. The records showed that over 50% of the scales that showed as weighing within tolerance, when tested with 1,500 lbs., weighed out of tolerance when the test load was increased to 25% of the capacity of the scale.

"Manifestly a radical change in testing equipment was necessitated by a revolution in transportation bringing onto scales the 20 ton loads that concentrated 75% of their load on one end. Increased speed and increased loads in testing were needed.

"The last biennial appropriation gave the weights and measures department a fund for building adequate testing equipment. Accordingly we have designed a tractor-trailer truck which will carry an electrical, self-propelled power unit for lifting and depositing 2,500 lb. weights on the scale to be tested. A sufficient number of these cast iron 1¼ ton testing weights will be carried in the trailer to load the largest motor truck scale with at least 25% of its capacity. Tracks will be carried to extend from the rear end of the trailer to the ground, over which the power crane may run to carry the weights between the truck and the deck of the scale being tested. Plans have been opened for bids, and the anticipated unit is expected to be in operation testing scales this spring. The new equipment is expected to test a scale thoroly in 30 to 45 minutes, with two operators, whereas present equipment, using hand-handled 50-lb. test weights, is so laborious that two men are unable to test more than three scales adequately in an average day. Costing twice as much as the old testing units, the new unit will be capable of four times as much work."

SEVERAL interesting addresses appeared on the program of the convention. C. L. Richard, Scale Technologist, National Bureau of Standards, Chicago, illustrated his description of the evolution of scales, with slides.

D. J. STRAUCH, East Moline, Ill., plant of Fairbanks Morse & Co., described the processes

of manufacture used in casting, milling, and assembling the Fairbanks Type S motor truck scale.

THOMAS J. RHODES, Chicago, Howe Scale Co., explained the design of torsion scale levers, and their operation under vibration and under load.

N. C. WEBSTER, Chicago, Richardson Scale Co., described the problems found in automatic weighing of materials, with particular reference to the automatic scales commonly used by country grain elevators for weighing grain out.

The local committee that had charge of hotel, luncheon and entertainment arrangements, was composed of W. D. Clark, Fairbanks, Morse & Co., M. J. J. Harrison and E. B. Smith.

Overhead Traveling Truck Dump

Flexibility in operation is the outstanding characteristic of the dump shown in the engraving herewith.

The overhead equipment obviates all floor complications.

Traveling on tracks above enables the dump to adjust itself into correct position over the desired placement of the truck being unloaded.

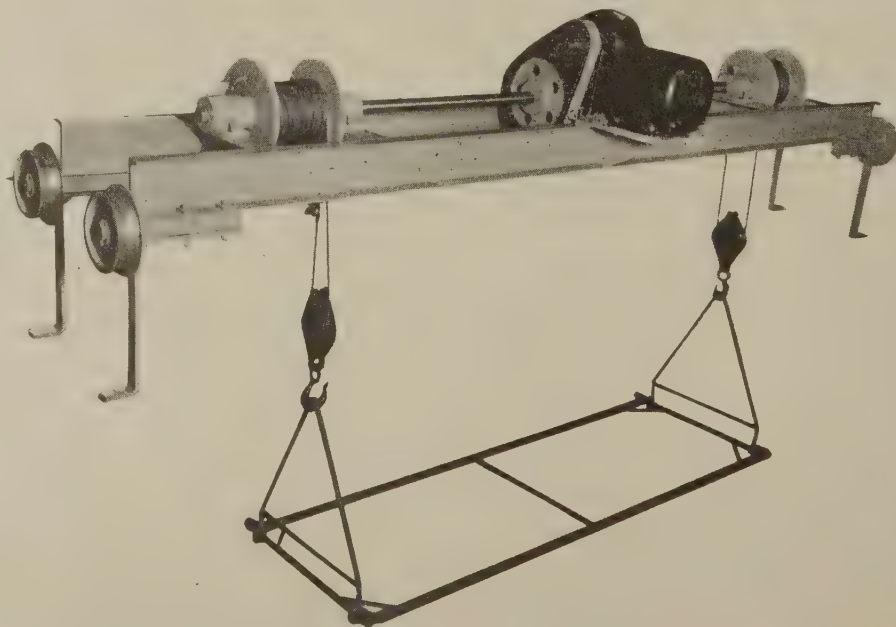
The worm gear drive so multiplies the power of the small electric motor required that the heaviest trucks are raised with ease, and the ample braking power enables the operator to hold the front end of the truck at any desired elevation.

After the truck is driven on the cradle and the front wheels raised slightly off the floor the truck can move the overhead dump ahead or back it up. As the truck rises the dump creeps back, keeping the weight always directly under it. Returning to the floor the heavy pulley blocks pull the cradle bails back to the side walls so that the truck may drive over the cradle and between the cables without unhooking the pulley blocks.

The electric motor is of 2 or 3 h.p. and adapted to the characteristics of the current available. It drives the worm gear and in turn the shaft upon which are mounted the two drums winding up the cable.

The dump is supplied by the manufacturer complete with motor assembled and ready to set up. No pits are required, and no changes are needed in wagon logs. The only requirement is two 3x12 timbers and bolts necessary for attaching timbers to side walls. These timbers carry the dump tracks of half oval steel.

The reversing type switch controlling the mo-



Overhead Traveling Truck Dump.

tor and dump may be operated by cable at the rear end or at any point in the driveway. This improved dump is known as the "K.C." Electric Truck Dump, and additional information will be furnished Journal readers on application to the manufacturers, the General Mill Equipment Co.

Electrical Extermination of Grain Insects

Extermination of insect life by electrical waves of high frequency has been demonstrated successfully; and Jesse H. Davis, a railway electrical engineer, has been granted letters patent, No. 2,006,265 on the practical application of electrical extermination.

The wave length employed ranges from 6 to 30 meters, or frequency ranges of from 50,000 kilocycles to 10,000 kilocycles, the frequencies within the maximum and minimum ranges given may be employed. In treating grain in a thin sheet with frequencies in the order of 55,000,000 and above, weevil and all other insect life in or on the grain will succumb within one to three seconds.

The insects, when thus treated, are subjected to the dual action of being heated from within and without, thus bringing about a quick rise of temperature to the lethal point. During this treatment the grains of wheat are also exposed to the radiant heat from the glass, but the grain being a very poor heat conductor does not respond to temperature elevation as rapidly or to the same degree as the insects or to such a degree as to be heated to an injurious extent during the time period of treatment. The grain, therefore, will be kept comparatively cool while the insects succumb to treatment, because the insects develop a lethal temperature considerably above that developed in the carrier material.

The adult insects and their eggs may not only be destroyed, but losses prevented by the

depredations commonly committed by insects hatching from the eggs, which can not be destroyed by the chemicals generally employed.

Extermination is conducted in a box thru which the grain flows in a plurality of streams. As shown in the engraving herewith, it comprises a suitable framework 21 which supports the hopper 16, spout 18 and the tank or box-like casing 22 of the exterminator. The casing 22 is pivotally supported by a counterweight lever 23 from the frame 21, which lever carries a counterweight 23 at one end and at its opposite end is pivoted to the casing 22 and to a rod connection 23a, having associated therewith a shock absorbing spring 23b, and which couples the lever to the actuating crank 23c of a swinging segmental dump valve 24 controlling the discharge of the grain from the hopper 16 to the casing, the outlet end of the hopper 16 being provided with a brush guard 23d to prevent crushing of the grain. The casing 22 thus serves as a weighing receptacle to receive a pre-determined amount of grain controlled by its capacity and the action of the counterweight 23' and is mounted to rise and fall to control the movement of the valve 24 and the flow of grain thereto from the hopper 16. When the casing 22 is at its upper or unloaded position, to which position it is raised by the weight 23' when the treated grain is discharged therefrom, valve 24 is opened for the feed of grain thereto from hopper 16. When the casing is filled with grain, however, it descends under the weight thereof to a lowered position against the resistance of the counterweight, thereby closing the valve 24 after delivery of a measured amount of grain from the hopper 16 to cut off the feed of grain to the exterminator while the grain therein is being treated.

In order to ensure retention of the grain for the predetermined treatment period in the exterminator and the discharge of the grain at the end of such period, an automatic dump valve 25 of suitable type is provided at the outlet end of the exterminator casing. This valve 25, as shown, is normally maintained in closed position by the action of a counterweight 26 and is opened at the predetermined time period by means of a time-controlled motor driven dumping or trip device comprising a rod 27 operatively connecting the valve 25 with a pivoted actuating lever 28 having an arm 29 arranged to be engaged by a striker or trip pin 30 on a motor driven rotary trip member 31. This member 31 may be suitably operated for a working action by or from any source of electric or other power. The pin 30 is engageable with any one of an annular series of spaced openings 32 in the member 31 whereby the trip device may be regulated to operate the dump valve automatically after the lapse of a certain time in seconds or minutes, depending upon the character of the grain treated, the frequency of the high frequency oscillations employed, or other working conditions.

Arranged in working pairs within the exterminator casing is a multiple plate condenser comprising sets of electrodes 33 and 34, disposed vertically therein in the form of partition plates or plate-like elements, sub-dividing the casing into a plurality of flow channels and space-charge fields 35. These spaces or channels communicate at their upper ends with the inlet of the casing and at their lower ends with the outlet.

The electrode plates are supported in position by notched cleats 36 so as to be readily insertible and removable when occasion requires, and each electrode plate comprises a conducting body 37, of copper, aluminum or other suitable electric conducting material, molded in or covered by glass, porcelain, or other suitable insulating material 37'. This insulating or non-conducting material may consist of plates of glass of double thickness cemented or otherwise secured to the electrode plates and suitably sealed at the edges to prevent current leakage.

The effect of the induced eddy currents at the optimum frequency or within the range of optimum frequencies employed under these conditions is to develop by induction in the insect, eggs, larvae, or pupa, a temperature of from 110° to 150° F., the most effective temperatures being from 120° to 140° F., at which temperatures the insects, their eggs, larvae or pupa are destroyed without inducing such a high temperature in the grain, or a sufficiently high temperature to effect the germinating properties of the grain, which will remain unaffected for the short period to which it is exposed during treatment.

A great advantage of this apparatus and method of treatment, besides that of economy of operation, is that it is inexpensive in construction and may therefore be supplied and installed at a comparatively low cost, is rapid in its action, allowing a large amount of material to be treated within a given time, and under all proper conditions it has no deleterious effect whatever upon the grain treated, the character and time period of treatment being such as to avoid any appreciable drying out or other deleterious effect on the grain.

Spokane, Wash.—Winter wheat farmers in this state, who had filed applications for 1936-39 AAA contracts, who had set aside 5 percent of their 1936 wheat land as adjusted acreage and who had seeded fall wheat by Jan. 6th, 1936, will participate in the "Moral obligation payment" by the federal government. Payment will be made from the \$60,000 appropriation for this purpose made by the present congress.

Automatic Weighing of Materials

By N. C. WEBSTER, before National Scale Mens Ass'n

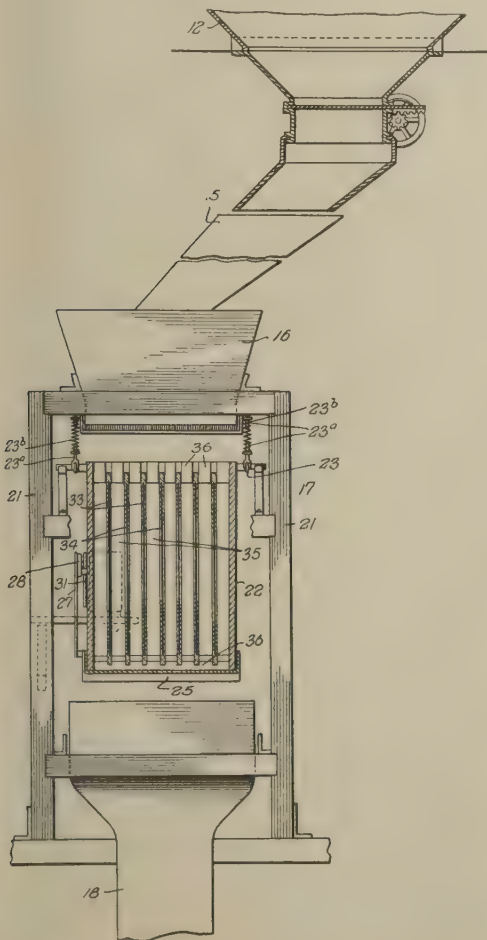
The business of the average scale man is to furnish and keep in good order equipment designed to counterbalance unknown mass by known mass and thus determine the weight of a given quantity of material. His problems are concerned with leverages, pivots, friction, inertia, etc.

In the automatic weighing of materials the process is reversed and the problem is to make materials of unknown mass counterbalance known mass in a series of predetermined units until the unknown mass is exhausted. These units are automatically counted and totaled. New factors enter into this arrangement making the weighing problem somewhat more complex.

Those familiar with automatic grain scales are acquainted with the suspended column or dribble stream, the part played by impact in this connection, and the method for compensating this dribble. Long experience has proved the method of compensation to be accurate, with the result that industry is using more and more automatic scales where materials must be accurately weighed and proportioned prior to mixing. An example is the series of automatic scales found in the glass division of the Ford factory, accurately proportioning the ingredients that enter into the manufacture of plate glass; and in the Hiram Walker distillery where grain is proportioned before being passed on to the cookers.

These scales are so arranged that if a bin feeding only one of them runs empty and fails to deliver to the scale, all of the scales in the series are automatically stopped.

The use of automatic scales in the chemical industry, where the greatest of accuracy is required in the proportioning of ingredients, is sufficient proof of the dependability of automatic weighing, free of the natural human error so often found in hand balancing, and is the finest recommendation of country elevator grain weights, as established by automatic scales.



Electrical Grain Insect Exterminator.

Purdue Holds Grain Grading School

"This is the fourth grain grading school to be held by Purdue University," said Prof. F. E. Robbins of the Agronomy Department, mildly correcting the earlier statement of W. B. Combs, general field headquarters, Chicago, at the opening session of the grain grading school in Lafayette, Ind., Mar. 18-19, fostered by Purdue University, and the Indiana Grain Dealers Ass'n. "But this gathering of over 70 grain dealers of the state is the largest enrollment we have ever enjoyed in these two days of classes. It shows a real interest in grain grading problems."

Sec'y Fred K. Sale, of the Indiana Grain Dealers Ass'n, took charge of the registering of attendance that reached a total of 75.

The Wednesday morning session was left open to registration, except for a general assembly of those in attendance at which the grain dealer students came to know the instructors, Prof. Robbins, W. B. Combs, H. P. English of the Board of Review, Chicago, and Clark Russell, Federal supervisor at Indianapolis.

PROF. ROBBINS opened the Wednesday afternoon class with a description of sampling methods, exhibiting a probe and canvas that is used by samplers in normal practice, explaining the principle of taking five probes in a car, keeping them separate on the canvas to observe the manner of loading the car and whether or not the car has been plugged, then mixing for an average sample. A short, folding ladder, with hooks at one end, was exhibited as a means of easily climbing over grain doors, into grain laden cars.

CORN GRADING was the subject of the Wednesday afternoon classes. The students were divided into three groups, each of which took its turn at using the laboratory equipment on actual samples of corn, finding the test weight per bushel, using the dividers, hand sieving, using the Emerson kicker, the Brown-Duvel moisture tester, the electric moisture meter, and hand picking samples for damage. An instructor took charge of each group, making the first demonstration, then supervising actual practice by the students.

A BANQUET was held in the Union Building at the University Wednesday evening.

PROF. J. A. BEESON following an excellent dinner opened a round table discussion on the seed corn situation. He discouraged the thought of getting seed corn very far away from home.

"We have heard of inquiries for Argentine corn to be used as seed," said Prof. Beeson. "Seed corn grown far from the locality in

which it is to be planted is apt to prove unadaptable, and give a poor yield. Enough suitable seed corn can be found in Indiana to meet our planting requirements. Most communities have a few cribs of corn that will germinate high enough for seeding purposes. You can perform a service to yourself and to your farmer patrons by locating such cribs. If you cannot afford to buy them, you can tell others where the seed corn is available.

"A strenuous seed corn testing program by grain dealers is amply justified this year. The ordinary rag doll is a good method, for it shows not only the percentage of germination, but the strong and weak ears, and the amount of disease present.

"A common lard can will hold 25 rag dolls, and each doll will test 20 ears of corn. A 25 watt electric light suspended into such a lard can will hold the temperature at 70 degrees. So you see there is not much cost connected with making extensive tests for the farmers in your community.

"In Purdue's laboratory we have had samples of corn germinating all the way from 10% to 90%. Many samples test 80% or better.

"Well dried, two year old corn should make good seed. Good cribbed corn of last year's crop, showing high germination is selling from \$5 per bushel down. Selected seed corn with guaranteed germination is selling from \$5 per bushel up.

"A farmer may sell seed corn on his farm without coming under the Indiana Seed Law, so long as he does not advertise, or deliver the seed. The Indiana Seed Law is primarily a correct labeling law. Seed of any germination may be sold, but the tag or label must show the correct germination, with only slight tolerance allowed for error."

Responding to Prof. Beeson's questions, eight present showed they knew of cribbed corn in their communities suitable for seed; 10 showed they were making extensive germination tests on local corn for their patrons.

J. J. BATCHELOR, Sharpsville, said: "We run a moisture test on proposed seed corn as a preliminary to the germination test. Excessive moisture tells us whether we are likely to find the germination good."

Representatives from Jasper, Tipton, Hamilton, Marshall and Elkhart counties thought that suitable seed would have to be brought in to meet the local planting requirements. The southeastern part of the state appeared to have a sufficiency of corn suitable for seed.

In the Union Building lounge, following

the banquet and seed corn session, E. F. "Soybean" Johnson of the Ralston-Purina Co. talked on "Keeping Pace with Soybean Increases," reviewing statistical data that showed increases in production of soybean meal from 125,000 tons annually in 1933 to 650,000 tons in 1935; the increase in processing units, the export demand, and price factors affecting soybeans. A summary of his address is published elsewhere in this number.

WHEAT AND OATS grading was the subject of the Thursday morning classes. Samples were handled by the students in the same manner as in the laboratory work on corn the previous afternoon. Many students found difficulty in accurately picking samples of mixed wheat, separating the hard and soft berries, and many cursed, under their breaths, the Michikoff and Purkoff strains that varied between hard and soft, and gave them so much trouble on grades.

PROF. ROBBINS commented that smut might become a problem in Indiana and encouraged smut control measures. "Two ounces of copper carbonate per bushel of seed wheat," he explained, "when thoroly mixed, will control ordinary stinking smut. Smut control is a seed treating problem.

"For the loose smut forms wherein the smut spores are inside the berries, the hot water method is best, and is suitable for treating small quantities. Put the grain in sacks and soak it in cold water for four to five hours before treatment.

"For the treatment have two barrels, each about one-third full of hot water. The temperature in the first should be 120 degrees, the temperature in the second must be 129 degrees, constantly maintained by the addition of hot water, poured around the inside edges of the barrel as the water cools. A floating dairy thermometer will guide maintenance of temperature.

"Treat two pecks of seed at a time, in a sack. Drop this in the first barrel, moving it up and down for one minute, so that the water can reach all of the berries, to warm them. Then treat them in the second barrel in the same manner for 10 minutes. Then spread the seed in a thin layer in a well ventilated place to dry, stirring frequently. Two or three days will be required for the drying. A few kernels will sprout. This is a home treatment method, which the farmers should be encouraged to use, especially where they have not more than four or five bushels to treat."

MR. SKIVER of the University described his development of a machine for treating seed corn, wheat, oats, and other grains with copper carbonate or mercuric dusts. "Elevators have a 75% profit in such dusts," he said, "and can easily increase their sales, by installation of such a power machine for seed treatment, yet keep the cost for seed treatment down to from 7c to 10c per acre for the farmer.

"Garlic is a problem only in the southern one-third of the state. It is a perennial plant, therefore it must be controlled under ground. Two years of plowing the soil in the spring, just before sowing to corn or soybeans, a thoro job of covering being done, will kill out the garlic."

Purina Mills, under the local management of Jesse Young, supplied the luncheon for the grading school delegates on Thursday. Many lingered so long over the excellent repast that they almost missed the tour which Mr. Young conducted thru the feed mill and soybean processing plant of his company, where he explained the huge cookers, expellers, and filters that process 300,000 bus. of soybeans annually.

SOYBEAN GRADING was the subject for Thursday afternoon. Prof. Robbins demonstrated that hand sieves shorten the labor of separating good beans, splits, and foreign



Grain Grading School for Dealers at Purdue University.

material, leaving little to be done by hand. "In picking samples of soybeans," said Prof. Robbins, "use the knife (a razor blade will do) frequently on damaged beans. That is the only way you can tell the extent of the damage, and whether that bean belongs with the good commercial beans, or must be separated as damaged. The outside of the damaged bean is often insufficient evidence that the bean is damaged for commercial purposes." The class was largely devoted to picking of soybean samples.

At the close of the class Prof. Robbins expressed his appreciation of the flattering attendance and attention of the grain dealers, and honored the work of his colleagues who made instruction work possible with so many.

In Attendance

From the Board of Review, Chicago, came W. B. Coombs and H. P. English.

From Indianapolis came E. K. Sheppard, Lew Hill, Supervisor C. A. Russell, R. R. Stigler, L. E. Cox and Sec'y Fred K. Sale.

One from Illinois, Chas. Clauson of Sheldon. Lafayette dealers included Robt. Alexander, Jesse Young, C. R. Roberts and H. C. Huseman and Elmer Carte.

Karl R. Applegate, Cicero; Fred Pearson, Fairmont; C. G. Egly, A. E. Rey, John Zingle and David Bash, Ft. Wayne; Bryant Robertson, Vernon Johns and Elmer Strowd, Forest; Donald Boyd, Winchester; Delmar Barr, Ridgeville; W. R. Owens, Montmorenci; J. J. Batchelor, Sharpville; John Grogan, Ambia; James A. Reddick and Fred M. Atkins, Noblesville; Alfred Levy, New Haven; Everett E. Daily, Oak;

O. L. Barr and K. Cross, Bicknell; Dewey B. Wilson, Roachdale; Charles F. Reeves, Charlottsville; Leland L. Moore, Perrysville; Harry Wilcox and A. O. Thomas, Marion; Grant W. Pearce, Evansville; Adam Egly and Jo Matlin, Geneva; Joe Hamlin, Portland; Harold C. Wolcott, Rolling Prairie; Floyd Meyers and Lettie A. Powell, Rensselaer;

Wm. Loughry, Geo. Spencer and Roy Camp, Monticello; Jeremiah Kiefer and Jerome A. Kiefer, Elwood; Chas. M. Kerlin, Delphi; Bert Strain, Westphalia; Laura P. Kelley, Oxford; Lee Evans, Remington;

Mr. Hedworth, Remington; W. D. Adams, Elizabethtown; C. R. Bahler, Galveston; John Frantz, Clarks Hill; Roscoe Walter, Walter Grain Co., Spencerville; W. W. Pearson, West Point;

Ernest Ball and F. Robinson and E. Ball and J. W. Stauffer, Nappanee; Ivan W. Syler and H. W. Cripe, Plymouth; C. W. Shuman, Logansport; Avon Burk, Geo. Thomas and W. S. Gladfelter, Decatur; Wilbert Stahly and Victor Stuckey, Berne.

Water Competition Reacts Against Inland Shipper

Indirect subsidy to water carriers in their competition with railroads, at the expense of inland shippers not directly served by the water routes, results from the restrictions of the long and short haul clause of the Interstate Commerce Act, according to Z. G. Hopkins, representative of the Western Railways.

"This inability to effectively meet competition, resulting from artificial rather than natural causes, has been an important influence toward decline in rail traffic volume and revenues which in turn has been an influence toward higher rates on the traffic continuing to move by rail than would be required with greater traffic volume. Of necessity, the burden of the higher rates rests upon traffic that may not avail itself of alternative and competitive transport.

"If non-competitive business will no longer support adequate rail service, as Commissioner Mahaffie has declared to be the fact, regulation that requires the railroads to forego business that they could transport with increase in both gross and net revenues, simply to protect water carriers in the enjoyment of artificial advantages, assuredly results in preferential treatment of sections and shippers who can avail themselves of water transportation, and in unjust discrimination against inland sections and shippers who must in consequence carry a heavier proportion of the whole cost of the rail transportation that is essential to the entire country."

Howard R. Tolley, New A.A.A. Administrator

Chester C. Davis, administrator of the A.A.A. having been sent abroad by the president to study European conditions, H. R. Tolley has been appointed acting administrator in his place.

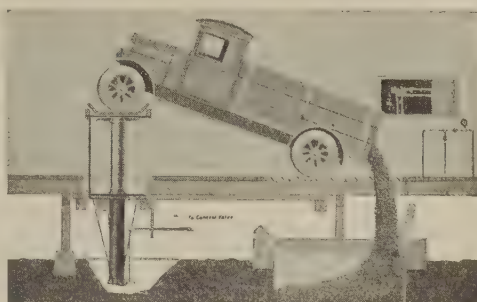
Mr. Tolley is a native of Howard County, Indiana, has taught village, county and high schools, and in 1912 entered the federal service as mathematician for the coast and geodetic survey. In the early 1920's he was chosen by the Department of Agriculture to begin studies in farm management and agricultural economics. He is director of the Giannini Foundation of Agricultural Economics at the University of California. After Mr. Davis became administrator in December, 1933, he chose Mr. Tolley as assistant to direct the division of program planning.

Caught Trying to Burn Elevator

An 18 ft. length of rubber and canvas belting has been detected and convicted of making an ominous attempt to burn the Walters grain elevator at Auburn, Ind. During the recent subzero weather it became necessary to renew a belt on a 10 h.p. motor so the offending belt was taken from a warm store room and laced for normal tension, but out in the cold cupola it shivered and shrunk four inches, burning out both motor bearings and warning the employees of its chilled condition. Soon after the power was turned off the redhot motor ceased smoking and the threat of fire was withdrawn.

Bearings can be protected from the shrinkage of rubber belts in winter and their expansion in summer by automatic take-up devices which protect bearings from excessive or subnormal stress and prolong the life of the belting.

The GREATEST VALUE in a PNEUMATIC DUMP

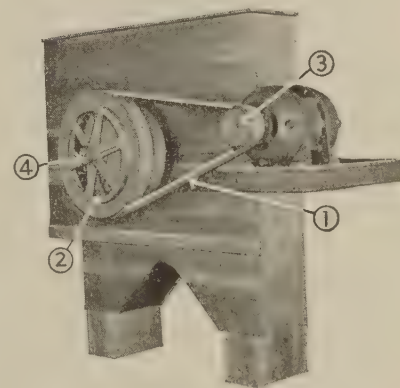


The STRONG-SCOTT PNEUMATIC DUMP

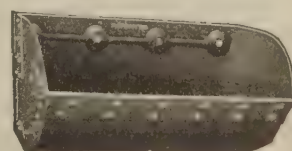
The ONLY HEAD DRIVE that delivers over 95% of Motor's Power to Head Shaft

1. Equipped with Texrope V-Belt Drive—over 99% efficient.
2. Equipped with automatic Back Stop.
3. Leg speed easily changed by changing sheave on motor.
4. Planetary gears running in oil—over 97% efficient.

EASY INSTALLATION—LOW ORIGINAL COST



SUPERIOR D. P. ELEVATOR CUPS



Use this Combination on your elevator leg.

Everything for Every Mill, Elevator and Feed Plant

The Strong-Scott Mfg Co. Minneapolis Minn. Great Falls Mont.



Special Meeting of Industrial Traffic League

The National Industrial Traffic League has called a special meeting for Mar. 31 at Washington, D. C.

E. F. Lacey, executive sec'y, states that the three most important subjects to be considered are:

Important development concerning highway transportation resulting from the new federal motor carrier act. Among these are regulation, administration, and shipping practices.

The application of the railroads to have the emergency freight rates granted last year made permanent. These rates expire on June 1, but the carriers are seeking to have them extended indefinitely.

Pending federal transportation legislation. Among the proposals now before congress, the league advocates approval of a bill to abolish the long and short haul clause and is opposed to other items, such as the six-hour day bill and the train length bill. If all the demands of railroad labor were granted, rail transportation would be so expensive, no one could use it.

Soybean Extraction Process

The exhibit by a Detroit automobile manufacturer at the Century of Progress of the method of processing soybeans to obtain oil and meal inspired many to attempt setting up plants to process the beans. The method looked very simple and easy as seen thru the glass tubes of the exhibit.

Varnum Parish, Jr., who was graduated from a middle west university in June, 1935, put up a soybean extraction plant at Momence, Ill., in a building formerly used as a chicken hatchery. The equipment was made in a nearby iron works and installed under the personal supervision of young Parish.

As shown in the engraving herewith, the beans passed from a bin thru a spout in which was a grinder, the ground beans continuing on down into a mixing conveyor pipe 18 ins. in diameter, inclined upward at about 10 to 15 degrees.

The solvent, hexane, was drawn from a 55-gallon drum on the floor and pumped into the mixing conveyor pipe to flow downwards thru the ground beans that were conveyed upwards by the spiral screw. At the lower end of the conveyor pipe the solvent containing the extracted oil was drawn off to receiving tanks and the solvent recovered in a still.

The oil-free meal dropped into another pipe directly under the mixing conveyor. Heat from the steam jacket on this pipe drove off the remaining traces of hexane. Steam for the jacket and for the engine driving the output was provided by a tractor engine boiler in a room partitioned off.

The plant was placed in operation for the first time for a few hours in the forenoon of Oct. 22, 1935. At 2 p. m. preparations were made to resume operation, and one hour later an explosion occurred, killing the owner and his assistant.

David J. Price, the dust explosion expert of the federal government, and Frank W. Seeger, deputy state fire marshal, investigated the wreckage and prepared a report from which the foregoing is taken. It is believed the hexane vapor, unnoticed by the operators, flowed over the floor thru the open door into the boiler room and became ignited, the flash there traveling back, causing a second explosion in the main room.

Soybean Inspection to Remain Separate from Grain Grades Act

The resolutions adopted by the Illinois Farmers Grain Dealers Ass'n and the Indiana Grain Dealers Ass'n urging that soybean inspection be placed under the Grain Standards Act have been considered by A. G. Black, chief of the Bureau of Agricultural Economics, who explains in a letter to Fred K. Sale, sec'y of the Indiana Ass'n that the placing of soybean grading under the same authority would require an amendment to the Act. Mr. Black writes:

The funds available for the administration of the Grain Standards Act are now so heavily obligated that it is not considered administratively advisable to attempt to absorb the cost of the increased work incident to handling soybean inspection under that Act. Moreover, we are not authorized to transfer the funds now expended for soybean inspection to the appropriation for the enforcement of the Grain Standards Act.

The legal authority under which soybeans are now inspected on a permissive basis contemplates the collection of fees which will reimburse the Government for the cost of the service as nearly as possible. Inspectors are licensed by the Department under the terms of co-operative agreements with the inspection departments of local trade and state organizations and are authorized to issue federal certificates on all soybeans inspected by them. The fees are collected by the co-operating agency and are divided between the co-operating agency and the federal department in a proportion calculated to reimburse both so far as possible, for the cost of the service as rendered. Funds received by the Department from these fees must be deposited into the Treasury and are not available for expenditure until appropriated by Congress.

We note the further recommendation that "the federal inspection fee be reduced to \$1.50 per car on soybeans as is the rate now charged for the inspection of grain." Presumably this refers to fees charged for the appeal inspection of soybeans. The original inspection of soybeans is considered a federal inspection, as inspectors who are licensed by the Secretary to inspect soybeans are authorized to issue federal certificates showing the grade of such soybeans in terms of the official U. S. Standards. The present charge for an appeal inspection of soybeans, as you doubtless know, is \$4, except that no charge is made for the appeal when the grade as shown by the appeal inspection is different from that shown by the inspection from which

the appeal was taken. This seemed to be a fair charge at the time it was approved by the Secretary as it is only double that charged for original inspection of soybeans in many important markets. Consideration will be given to a possible reduction in this fee altho it is not anticipated that such a reduction will be feasible.

Books Received

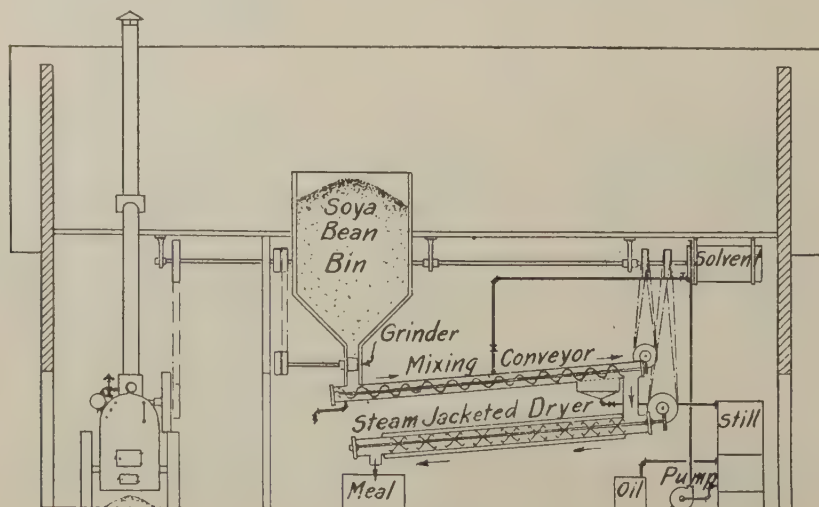
AN OHIO DIRECTORY of grain and feed dealers and manufacturers, of 120 pages, has just been published by the Ohio Grain, Mill & Feed Dealers Ass'n, in conjunction with the Ohio Farmers Grain Dealers Ass'n. The price is \$5.

STORY OF THE CONSTITUTION gives the history of the drafting of this bulwark of liberty. After perusing the 30 pages of this brochure every citizen with a spark of patriotism will understand why he must rally to the support of this marvelous document if he is to enjoy his present status as a free agent. By John W. Mace and Irving T. Gumb. Published by the "House of Little Books," New York; price, 15 cents.

SEED STATISTICS reproduces by photographic process 58 pages of typewritten data on field seeds, including yield per acre, prices paid to growers, retail prices, stocks and shipments, a tabulation of tests the past winter by 78 seedsmen on purity germination and weight per bushel, covering alfalfa, the clovers, timothy, red top, bluegrass, bermuda grass, millet, sorgho, sudan, rape, vetch, soybeans, cowpeas, velvet beans, Italian ryegrass, popcorn, and potatoes. Prices are quoted monthly for 15 years back at different market centers. Seedsmen will find this bulletin valuable for reference. Prepared by the Hay, Feed and Seed Division of the Bureau of Agricultural Economics, Washington, D. C.

AUTOMOTIVE MONEY-SAVING FACTS, by J. F. Winchester, manager of the general automotive department, Standard Oil Co. of New Jersey, associated in various capacities with engineering societies and motor truck ass'ns, is a highly valuable, 417-page volume for any grain dealer who operates one or more trucks. Comprised principally of the notes of the author, gathered thru long years of experience and observation in fleet operation and maintenance, the book frankly discusses questions of costs, accounting practices, depreciation, lubrication, economies in types of trucks, and operating costs, kinds of engines, kinds of fuels, safety factors, and other considerations in the purchase and operation of trucks in a helpful, authoritative manner that enables the reader to base his own decisions on automotive problems on sound, recognized facts. Care of the car, mileage hints, personnel management, safety, and the keeping of cost records are widely covered. Published by the Traffic Publishing Co., New York, N. Y. Price, \$3.

OPERATING COSTS OF LIGHT DUTY TRUCKS: Companies that use fleets in which trucks of a rated capacity of one and one-half tons or less predominate will find many points of interest in *Operating Costs of Light Duty Trucks*, a report recently issued by the Metropolitan Life Insurance Co. Information lends itself readily to comparison with one's own records because, so far as possible, the statistics given are qualified by descriptions of the circumstances in each case; further, the tables included give operating statistics of fleets for which identical accounting methods are used. There are 24 detailed operating cost tables in the report. With but one exception, they are comprised of original recent material taken direct from the operating records of companies that cooperated in the survey upon which the report is based. Various breakdowns are represented by these tables: by truck capacity, by length of route, by total mileage, by states, by geographical regions and cities. Notwithstanding the marked increase in the use of motor truck transportation in industry and commerce, there has been scarcity of usable data on truck operating costs. This new report by quoting and analyzing actual records in the light duty truck classification adds measurably to available information. Any reader who wishes to study the details of this report may obtain a copy by writing to the Policyholders Service Bureau, Metropolitan Life Insurance Co., One Madison Avenue, New York, N. Y.



Plan of Soybean Oil Extraction Plant

Grain and Feed Trade News

Reports of new firms, changes, deaths and failures; new elevators, feed mills, improvements, fires, casualties and accidents are solicited.

ARKANSAS

Jacksonville, Ark.—The establishment of a co-op. feed mill and peanut picking plant is being agitated here.

Arkansas City, Ark.—Fire early Sunday morning, Mar. 8, destroyed a grist mill, machine shop and an adjoining residence, all the property of George James; loss, 3,000; reported as having no insurance.

CALIFORNIA

Pomona, Cal.—The Associated Grain & Mfg. Co. is now operating its new feed mill. Equipment for mixing, grinding, cracking and re-cleaning grain was installed.

CANADA

Lethbridge, Alta.—Geo. W. Green & Co. are installing a motor-driven Kelly Duplex Vertical Feed Mixer. The machine has a capacity of one ton, and floor level feed.

Winnipeg, Man.—The council of the Winnipeg Grain Exchange has decided that for the present at least that exchange will operate on its usual time schedule, despite the change in the trading hours of the Chicago Board of Trade. The local schedule is from 10:30 a. m. to 2:15 p. m., eastern standard time.

Three Rivers, Que.—It is reported that the Canadian Government has signed a lease with the Three Rivers Grain & Elevator Co., Ltd., for the government-owned wharf on which the company will erect its 2,000,000-bu. elevator, as previously reported in the Journals. The annual revenue estimated to be derived by the government is said to be \$32,835, or 16% on the investment in the leased land.

COLORADO

Willard, Colo.—Butler-Welsh Grain Co. has sold its elevator at this station to Herbert Welsh, of Sterling, Colo.

Matheson, Colo.—The grain, feed and bean business of the Robinson Grain Co. has been bot by R. S. Johnson, who took possession Mar. 1. The sale includes the warehouse and cleaning machinery and a residence property.

Longmont, Colo.—The Golden West Mill has been leased by V. E. Wickstrand and Paul B. Adams. For the past 18 months Mr. Wickstrand has managed the mill for its owners, Messrs. Johnson and Miller, while Mr. Adams has been associated with the business as a salesman for about two years.

Limon, Colo.—Mark Logan recently resigned as manager of the elevator and mill of the Limon Milling Co. and has been succeeded by W. F. Agnew, of Denver, who will move his family here after the close of school. Mr. Agnew, who is financially interested in the company, has had the office remodeled.

Sterling, Colo.—R. A. Collier, of Grand Island, Neb., is the new manager of the local office of the Butler-Welsh Grain Co., succeeding J. W. Campbell, who has taken a position as manager of a grain company in Denver. Mr. Collier, who has moved his family to Sterling, was formerly associated with the Butler-Welsh Co.

ILLINOIS

South Hooper (Beaverville p. o.), Ill.—The Golden Rule Elevator is installing a new truck lift.

Odell, Ill.—The Valley Grain Co. contemplates the installation of a new scale in its local elevator.

Wing, Ill.—We expect to install a new scale and electrify our elevator at this point.—Valley Grain Co.

Williamsfield, Ill.—Williamsfield Farmers Co-op. Co. has replaced its corn cracker with a new Kelly Duplex Corn Cutter and Grader.

Crescent City, Ill.—Harlan & Sternberg are improving their equipment by installing an overhead electric truck lift in their elevator.

Sugar Grove, Ill.—The Sugar Grove Grain & Lbr. Co. contemplates installation of a new elevator belt and buckets before oats harvest.

Arthur, Ill.—The Farmers Elevator Co., A. F. Davis manager, has just installed a Little Giant Electric Truck Lift in its main elevator here.

Lincoln, Ill.—John L. Savage, of Spellman & Co., received a slight fracture of the shoulder blade recently, when struck by a falling spout at the company's elevator.

Mason City, Ill.—The Farmers Grain & Coal Co. has completed an improvement in the form of an extra office room, making a total of three rooms to the grain office.

La Salle, Ill.—A. R. Lyons has succeeded Edw. M. Finnan as manager of Lamson Bros. & Co.'s office here. Mr. Finnan has been transferred to the office at Storm Lake, Ia., as manager.

Heyworth, Ill.—The Hasenwinkle-Scholer Co. contemplates immediate construction of a new 40,000-bu. elevator to be erected on the site of the house that burned last December, as previously reported.

Waddams Grove, Ill.—The elevator at this point, formerly operated by Graham Bros. Co., will be razed soon, another landmark passing into history. This elevator was a busy place in the "early days."

Sheldon, Ill.—A Western Overhead Electric Truck Lift and steel bin bottoms are among the improvements being made in the elevator of the Sheldon Farmers Co-op. Elevator, managed by J. D. Worsham.

Gays, Ill.—Considerable damage was done at the Munson Bros.' elevator on Mar. 13, when a drag chain broke. About 40 feet of the chain

went into the corn sheller, putting it out of commission temporarily.

Abingdon, Ill.—Abingdon Milling & Cattle Feeding Co., incorporated; capital stock, 2,000 shares, no par value, common; incorporators: Ralph Niles, John Turney, George S. Schugmann; to deal in agricultural products.

Malta, Ill.—We are installing a Kelly-Duplex blower and cyclone meal collector to convey the meal from our attrition mill, and are putting in a Handy Sack one-ton feed mixer to complete our feed service.—A. Theo. Peterson.

Goodwine, Ill.—The foundation for the new elevator of the Goodwine Grain Co., which is being built to replace the elevator that burned several months ago, has been completed and structural work on the new cribbed house is progressing rapidly.

Morris, Ill.—James T. Finnegan on Mar. 10 received an order from the district court in his bankruptcy matter to resume operation of his grain elevator on the south bank of the Illinois River, which has been closed because of financial distress.

Stonington, Ill.—A jury on Mar. 11 awarded Kenneth Kerwin damages of \$3,500 in his \$20,000 suit against the Stonington Elevator Co. for injuries suffered in November, 1933, when the farm wagon which he was driving went thru the floor at the elevator.

Yates City, Ill.—C. M. C. Brown, who recently purchased two elevators here, is having the west elevator taken down. It is understood he will erect a new elevator and repair the other one. Both elevators have been in bad repair for some time, it is said.

Gridley, Ill.—The elevator office of the Boies & Blessman Co. has just been remodeled and enlarged. The company has recently been incorporated; capital stock, 174 shares, no par value, common; incorporators: Henry and Anna P. Blessman and Walter H. and Grace E. Boies; to operate grain elevators.

Rutland, Ill.—A suit for \$600 against the Rutland Farmers Grain & Supply Co. was reported filed recently by King Reatherford, a farmer near Taylorville, to secure payment for soybeans said to have been purchased by the Rutland Co. last summer and for which Reatherford claims he received no payment.

Springfield, Ill.—The week of May 10 has been designated by proclamation of the governor as Illinois' first conservation week. The movement is being sponsored and supported by clubs, societies and other organizations throughout the state which are interested in any phase of conservation work.

Chester, Ill.—The H. C. Cole Milling Co., Inc., has had Horner & Wyatt prepare plans and specifications for a 100,000-bu. receiving elevator, giving the company a total storage capacity of 500,000 bus. Construction bids were to have been received on Mar. 25, completion of the elevator to be in time to receive the new crop.

Mt. Pulaski, Ill.—Fire occurred in the big electric motor that runs the machinery of the Mt. Pulaski Farmers Grain & Elevator Co.'s elevator, shortly after 8 a. m., Feb. 25. Orville E. Martin, manager, with the assistance of others, immediately had the 150 feet of new fire hose (belonging to the elevator) unreeled and connected with the fire plug, and the fire was extinguished with little damage and without calling the fire department.

Lawrenceville, Ill.—The Horner Elevator & Mill Co. offered a day of free entertainment on Saturday, Mar. 14, beginning at 10 in the morning with the showing of a talking picture depicting family farm life, serving free lunch to all from out of town, and continuing in the afternoon with a repetition of the picture for the benefit of those who were unable to see it in the morning. The picture was shown in one of the large warehouses of the elevator.

**Specialists in
Ventilating Grain Elevator Legs and Grain Storage Bins**

HH ROBERTSON CO
BUILDING PRODUCTS BUILDING PRODUCTS
PITTSBURGH, PA.

District offices in Chicago, St. Louis, Minneapolis and other large Cities
ROBERTSON PROTECTED METAL ROOFING AND SIDING IS STRONG AND CORROSION-PROOF

Clifton, Ill.—Two elevators, that of the Wallace Grain Co. and that of the Clifton Grain Co., were entered during the night of Feb. 28, entrance being gained at both places by prying open a window with a crowbar. At the Wallace office the safe was broken open and \$1.50 and some pennies stolen. Nothing was removed from the Clifton Co.'s office, but papers were scattered over the floor.

Kankakee, Ill.—The Carter Grain & Feed Co.'s elevator and the Kankakee Feed & Fuel Co.'s office were visited by burglars, early in the morning of Feb. 29, who were unsuccessful in obtaining any cash, altho safes at both places contained considerable money and the combinations of both were knocked off. Entrance was gained at the Carter Co.'s office by prying back the night lock with some instrument, but the prowlers were evidently frightened away by a patrolman, who found the office door ajar. At the Kankakee Feed Co.'s office, the lock on the driveway door had been forced and the inside door to the office pried open. Unable to get any money, the thieves wrecked the office equipment. The electric adding machine was smashed and the carriage knocked off, the scales were jimmied and thrown out of balance, the machine which automatically calculates the weight and which was fastened to the floor and wall, was pulled out, and a pane of glass broken.

CHICAGO NOTES

New members of the Board of Trade include Alexander M. White, Jr., of New York, and Norman L. Cappel, broker, of Liverpool, England.

Henry Keir, head of the Chicago Chapter of the Society of Grain Elevator Superintendents, has called a district meeting for the evening of Apr. 21.

John W. Bingham, traffic manager of Corn Products Refining Co., was installed as president of the Traffic Club of Chicago at that organization's 29th annual business meeting at the Palmer House on the evening of Mar. 17.

Work of rebuilding the Glidden Co.'s soybean products plant (that was wrecked by an explosion last fall, as previously reported) is progressing. It is expected that the expeller building will be ready for operation in eight weeks, or about the middle of May. The chemical plant will then be started, to be completed the last of July. The contractor is the E. I. Leander Co., who built the former plant.

Bondholders of the Chicago Elevator Properties, Inc., have worked out a new plan of reorganization under which a new company would take over the elevators in consideration of \$83 for each \$500 bond, and first mortgage income bonds of the new company in exchange for the remainder of their claims, \$100,000 of working capital to be put in by James Norris, who will receive 51% of the capital stock, all the preferred stock and all the stock of the Illinois River Packet Co.

The Board of Trade on Mar. 19 resumed the schedule of trading hours that was in effect prior to Mar. 1, when Chicago adopted eastern standard time. Trading now opens at 9:30 a. m. and closes at 1:15 p. m., except on Saturdays, when the market will operate from 9:30 till noon. Members of the exchange failed to ratify a proposal to make permanent a special ruling of the directors to conform with outside markets which were not affected by Chicago's time change. The vote was 410 to 296 against the directors' ruling, and the old schedule went back into effect automatically.

INDIANA

Fowlerton, Ind.—The Fowlerton Elevator & Feed Co. has filed preliminary notice of dissolution.

DeMotte, Ind.—Al Konovsky will begin the construction immediately of a new fire-resistive office.

Tocsin, Ind.—Tocsin Lbr. & Grain Co. plans to double the size of its present office immediately.

Corunna, Ind.—The Corunna Feed Mill has recently installed a Kelly Duplex Corn Cutter and Grader.

Dunkirk, Ind.—The Dunkirk Coal & Feed Co. has purchased a Blue Streak Hammer Mill with direct connected motor.

Winamac, Ind.—Co-Op. Elevator Co. has painted entire plant; using Big-4 yellow color, producing an attractive appearance.

Tab, Ind.—Federal Grain Elevators, Inc., operating elevators in Illinois, have leased the elevator here from the Tab Grain Co.

Peru, Ind.—On Mar. 6 the elevator and stock of the Peru Grain & Coal Corp. were slightly damaged by fire of undetermined origin.

New Haven, Ind.—Ben Levy Grain Co. has replaced its cracked corn machine with a new, larger Kelly Duplex Corn Cutter and Grader.

Thornhope (Oak p. o.), Ind.—Farmers Grain & Supply Co., expects to replace its steam power with all electric, and will also install a new hammer mill.

Fort Wayne, Ind.—An evening meeting of the Northeastern Indiana Grain & Hay Dealers Ass'n will be held at the Anthony Hotel, at 7:30 p. m., Apr. 2.

Auburn, Ind.—The Walters Grain Co. is having Chris Wickey install a new 26x9, 20-ton Howe Truck Dump Scale at its elevator, together with other new equipment.

Rockville, Ind.—Plans have been drawn for construction of a 40x80, one-story, tile, metal-roofed warehouse for the Parke County Farm Bureau Co-op. Ass'n, Inc.—F. E. Rose, mgr.

Brook, Ind.—The Standard Elevator Co. has transferred Ross Curless, manager of its elevator at Kewanna, Ind., to this point, to have charge of five of the company's elevators.

Templeton, Ind.—A Burroughs adding machine and a Sentinel radio were counted among the losses of the McConnell Grain Co. when thieves broke into its offices the night of Mar. 15.

Danville, Ind.—Installation of soybean machinery is planned by the Hendricks County Farm Bureau in the recently purchased plant of the Klondike Milling Co. Feed and flour will be manufactured also.

Ambia, Ind.—The Ambia Grain Co. has purchased a 1½-ton Chevrolet Truck for hauling grain and coal. "We wonder now how we managed to get along without a truck before," says Manager John Grogan.

Linton, Ind.—After four months of rebuilding, remodeling and installing new equipment, the Linton Mill & Grain Co. is now manufacturing millfeeds, cornmeal and flour. Frank Sabo is manager of the plant.

Shadeland (LaFayette p. o.), Ind.—An attempt was made to enter the elevator of Robert Alexander during the night of Mar. 14, but the intruders were frightened away by the night watchman, who was in the office.

Hulbert (Valparaiso p. o.), Ind.—W. W. Pearson has purchased the elevator here on the Erie Railroad from the Hebron Equity Exchange, and is installing up-to-date machinery for operation. Coal and feed will be handled also.

Evansville, Ind.—William March, who formerly traveled the southern territory for the Rapier Feed Co., of Owensboro, Ky., now is representing the Ziliak & Schafer Milling Co. of Evansville, traveling Illinois territory.—W. B. C.

South Raub (Romney p. o.), Ind.—Chas. C. Lidster, local manager of the Crabbs-Reynolds-Taylor Co.'s elevator, ruptured himself while dumping a 120-bu. load of corn Mar. 6. He is recuperating in the Home Hospital at LaFayette.

Romney, Ind.—Thieves entered the office of the Simison Grain Co. the night of Mar. 14, making off with the radio. The office had been similarly visited, presumably by the same gang, on Feb. 29, getting away with the company's previous radio.

Terre Haute, Ind.—Graham Grain Co. has installed a hammer mill at its local elevator and has added another new 1½ ton Chevrolet truck to its fleet. Installation of a Winslow 100-ton track scale at the elevator is another improvement scheduled.

Boonville, Ind.—The Elkhorn Mills, W. H. Bradley, manager, have announced they have made connection with the Boonville Milling Co. By this arrangement they hope to serve the public better in feed, and flour. The New Idea poultry feed will be distributed by this arrangement.—W. B. C.

Rising Sun, Ind.—Edward J. Glass, of Williamstown, Ky., who has owned and operated several mills, has acquired the City Mills here, which he is putting in first-class shape for making feed and flour. In addition to his own make of feed, he will handle commercial feeds for stock and poultry.

Westpoint, Ind.—The Crabbs-Reynolds-Taylor elevators at this point, at South Raub and at Taylor Station (LaFayette p. o.) were broken into over the week-end of Mar. 14. The loot at Westpoint consisted of \$28 and a radio. It was believed that all the burglaries were committed by the same band.

Wakarusa, Ind.—H. W. and H. A. Layer, operators of the Wakarusa Milling Co., and elevators at Pierceton and Claypool, are placing all three of their plants under the name, "Layer Bros. Elevators." Each house has storage space for 10,000 bus. of grain and is equipped with feed grinding and mixing machinery.

Metamora, Ind.—L. R. Brumfiel, manager of the Metamora Feed Mill, has leased the ground formerly owned and operated by the Metamora Roller Mills, and is erecting a building on the site of the old mill. The corn milling and feed grinding equipment of the feed mill will be moved into the new building when it is completed.

Rensselaer, Ind.—William C. Babcock, grain dealer of this city, representing Jasper and Newton counties in the Indiana State Legislature, attended the special session of the legislature, which adjourned Mar. 18. The object of the special session was to enact social security legislation to match up with the federal enactment.—W. B. C.

FOSTER-KENDALL CO.

Carmel, Indiana

Royal Brand Seeds

Clover, Alfalfa, Timothy, Soy Beans

Over-Night Service

Ask for Samples and Prices

MICHIGAN

POULTRY WHEAT

RED, WHITE AND MIXED

MILLING WHEAT

ROSEN RYE

MALTING BARLEY

NATURAL PLUMP OATS

BUCKWHEAT

Ask for Samples and delivered prices

LANSING GRAIN CO., Lansing, Mich.

ELLIS DRIERS

Known the world over for reliability and perfection of product. Direct Heat — Indirect Heat — And Steam Heat. Also . . .

A complete line of Rotary Driers and Feeders for mill and feed plants.

The Ellis Drier Co.,

2444-56 N. Crawford Ave.

Chicago, Ill., U. S. A.



Complete
GRAIN & SEED
TESTING EQUIPMENT

OFFICIAL BROWN DUVAL
MOISTURE TESTERS

WT. PER BU. TESTERS

FOUR-IN-ONE SCALES

BOERNER SAMPLERS

GRAIN TRIERS—SAMPLE PANS

SEED TRADE REPORTING BUREAU

223 W. Jackson Boulevard

CHICAGO, ILL.

TEL. WABASH 3712

Kewanna, Ind.—Ross Curless, manager of the local elevator of the Standard Elvtr. Co., has been transferred by the company to Brook, where he will have charge of five elevators belonging to the Standard Co. He expects to move about the first of April.

Foresman Switch (Otterbein p. o.), Ind.—An Underwood typewriter, a grain testing bucket and balance, a couple of brooms, even ink and pencils, were included in the items lost by the Standard Elvtr. Co. to thieves who broke into the elevator office over the week-end of Mar. 15. The company's elevator was recently improved with installation of a new Western Corn Sheller and Corn Cleaner.

Claypool, Ind.—Layor Bros. now operate the Claypool elevator of D. W. Cripe (formerly run by Lestel Regenes) under the name of Layor Bros. Elvtrs., with Milton Brown as local manager. Work at completely remodeling the plant is almost finished. New machinery includes a feed mixer, corn sheller, corn cracker and grader, two stands of elevator legs, and 18 motors for individual operation of each mechanical unit, all bot from Sidney Grain Mch. Co.

Ambia, Ind.—Last month you published a news item about our having displaced our 45-h.p. diesel with a 48-h.p., 4-cylinder gas engine, and up to the present writing we have received thirty inquiries from different dealers asking about our installation. We also were visited by several dealers who are anxious to reduce their cost of power. We are still convinced that the new 4-cylinder gasoline engine is just as economical as the old diesel engine, and it is far more satisfactory when it comes to getting it started.—Ambia Grain Co.

INDIANAPOLIS LETTER

Jacob S. White is now the resident agent of the Stratton Grain Co.

The Indiana Grain Dealers Ass'n has recently added the following to its membership: Steinhart Grain Co., Indianapolis; Oxford Grain Co., Oxford; Suckow Milling Co., Franklin, and the Kellogg Grain & Elvtr. Corp., Buffalo, N. Y.

The following recently became members of the Indianapolis Board of Trade: Reily G. Adams, John P. Collett, Ernest R. Baltzell, Lawrence H. Barrett, C. F. Butturff, George M. Duffy, Harvey B. Hartsock, William H. Jungclauss, F. S. Langsenkamp, E. Kirk McKinney, Malcolm M. Moore, James S. Rogan, Arthur C. Shea, William G. Sparks, Dr. A. L. Sparks, John K. Wood, Frank K. Levinson, Fred L. Mahaffey, Dr. Miles S. Barton and William H. Remy.

A few weeks ago a member our ass'n reported to us that a field man of the Gross Income Tax Division had informed him that it would be necessary to pay on consignments of grain to points outside of the state, temporarily stored and eventually sold at a future date. The division referred this to their legal department and their attorneys have submitted their findings to the effect that proceeds from such a transaction were not considered by them an interstate shipment and were subject to tax. The ass'n in support of its member, and representing all other members in similar cases, immediately demanded an informal hearing before the attorneys of the division. This was held Mar. 9. A further investigation and a complete audit by the division will now be made concerning this test case. When this has been completed, a formal hearing will be held and we have already employed an attorney to handle our case.—Fred K. Sale, sec'y Indiana Grain Dealers Ass'n.

IOWA

Farnhamville, Ia.—Lee Davis, elevator operator here, is no longer in business.

Sioux City, Ia.—Two new feed mixers and a burr mill have been installed by the Western Co-op. Milling Co.

Rockwell City, Ia.—The wife of George Debe, who some time ago managed the Farmers Grain Co.'s elevator here for many years, died at her home in Slayton, Minn., Mar. 2.—Art Torkelson.

Des Moines, Ia.—Lamson Bros. & Co. have taken on William L. Read as customers' man and transferred Harvey Barber, of the cash grain department in Chicago, to the Des Moines office as bookkeeper.

Charles City, Ia.—O. L. Jacobs is installing a Kelly Duplex Vertical Feed Mixer in his feed mill here. The machine has a capacity of one ton, with floor level feed.

Fort Dodge, Ia.—Art Torkelson recently wired Noah for the loan of his ark, but the W. U. failed to make delivery, so Art is floating around the state in a scow. If you see him stranded throw him a line.

Stennett, Ia.—The Farmers Merc. Co. has sold all of its interests here, the elevator, lumber yard, store and livestock business, to Harry B. Turner and Delbert Holtmyer, possession being given on Mar. 2. Mr. Holtmyer will manage the business.

Marshalltown, Ia.—Central Distributing Co. (feed and flour jobbers), incorporated; capital stock, \$40,000 to be issued in shares of \$100 par value each; incorporators: C. R. VanGorden, pres.; E. L. Bruce, vice-pres.; C. A. Ames, sec'y.; J. M. Bruce, treas.

Storm Lake, Ia.—Edw. M. Finnan, formerly manager of Lamson Bros. & Co.'s branch office at La Salle, Ill., took active charge as manager of the local office Mar. 9, succeeding J. Miles Smith, who was transferred to theavenport, Ia., office as assistant manager.

Keokuk, Ia.—The Hubinger Co., corn products manufacturer, on Mar. 14 announced an increase in wages ranging from 10 to 15%. About 700 persons are affected. The company is also considering the payment of a bonus on a profit-sharing basis before the end of the current year.

Anthon, Ia.—Sam Reynolds, of Rock Rapids, Ia., who has been employed by the Quaker Oats Co. for several years, has been appointed manager of the local elevator, succeeding W. L. Jerman, manager for 10 years, who resigned to go into business for himself in the hardware and implement line.

Centerville, Ia.—Fire at the Standard Soybean Processing Co.'s plant on Feb. 22 did \$3,000 damage. Following the fire of last November, which destroyed the receiving elevator and connecting equipment, the elevator was rebuilt to twice its original size, this time of steel. The last fire was confined to the drier.

Dumont, Ia.—The Farmers Grain Co. has appointed J. R. Britcher manager of its elevator, succeeding the late John Thompson. Britcher has been assistant manager for about five years, and was made temporary manager on the death of Mr. Thompson early in February, as previously reported. Vernon Over-turf is the new assistant.

KANSAS

Inman, Kan.—The Enns Milling Co. has amended its charter, increasing its capital stock from \$60,000 to \$100,000.

Arlington, Kan.—The Arlington Elvtr. Co. recently added to its equipment a new and larger feed mixer, having a capacity of half a ton.

Hollis, Kan.—The Clay Leahy elevator, having a capacity of 12,000 bus., burned on Mar. 1, at 2 a. m. Loss, approximately \$7,000, including 3,000 bus. of wheat. Insurance was carried.

Russell, Kan.—Following the recent death of F. W. Hamm, manager of the Russell Milling Co., Oscar Krumpfus, former assistant to Mr. Hamm, has been appointed to succeed him.

Wilson, Kan.—Henry Kvasnicka has purchased the old Farmers Elvtr. from Mrs. George Eslinger and will operate it. In addition to buying wheat, he will handle feed and coal.

Cherryvale, Kan.—The Cherryvale Grain Co., which has been operating an elevator and store here for years, has been sold to individuals in the N. Sauer Milling Co., the change in ownership and operation becoming effective at once.

Ellsworth, Kan.—T. H. Ewing, who has been manager of the Ellsworth County Farmers Co-op. Union's elevator, has resigned and has been succeeded by Pat J. Nash, of Green, Kan. Mr. Ewing has taken a position with the Central Kansas Milling Co. at Lyons.

Syracuse, Kan.—R. M. Gibbens, manager of the Syracuse Co-op. Elvtr. & Supply Co.'s elevator for several years past, has resigned and taken a similar position in Thomas, Okla. W. B. Baldwin, one of the stockholders of the company, is in charge of the elevator temporarily.

KENTUCKY

Burnside, Ky.—A diesel engine has been installed in the Robinson Milling Co.'s plant, replacing electric power.

Bowling Green, Ky.—Bowling Green Milling Co., incorporated; capital stock, \$20,000; incorporators: H. W. Monroe, Ida Nell Monroe, H. G. Monroe and Oscar W. Thompson.—A. W. W.

Cadiz, Ky.—W. M. King has taken charge of the McKinney Mill here and will operate it as a feed and flour mill. The mill was formerly operated by Lewis Litchfield, who died several weeks ago.

Eminence, Ky.—Following a stroke of apoplexy, E. O. Tolle, feed merchant, died Feb. 19, at the age of 72 years. Mr. Tolle located at this point 35 years ago, and was pres. of the feed firm of E. O. Tolle Co.

Crab Orchard, Ky.—The feed, flour and meal mill formerly owned by the Lincoln Milling Co. has been sold to Mike Genton for \$3,250, by an agent for the Crab Orchard Banking Co. After making a number of improvements Mr. Genton will operate the mill.

CHOICE OATS

Suitable
for
SEED

Phone—

Wire—

Write

THE VAN DUSEN
HARRINGTON CO.

Minneapolis, Minn.

Polleyton, Ky.—Operation of his grist mill on Patterson Creek near here has been resumed by J. C. Walker, who has installed some new machinery.

Loretto, Ky.—Loretto Distilling Co., incorporated; capital stock, \$50,000; incorporators: R. E. Cambron, J. A. Ball and J. W. Thompson.—A. W. W.

Louisville, Ky.—Ernest C. Eberts, 66, of Jeffersonville, Ind., veteran flour and feed dealer and former mill operator, died at St. Edward's Hospital, New Albany, Mar. 6, of injuries received in a collision of his automobile and a truck on U. S. 31, five miles north of Jeffersonville, on Mar. 5. Mr. Eberts suffered fractures of all the ribs on one side of his chest, internal hemorrhage and other injuries. He is survived by his wife, Mrs. Hettie Eberts, and two daughters.—A. W. W.

MARYLAND

Reid, Md.—W. B. Lehman has installed a new Kelly Duplex Corn Cutter in his feed mill to improve the quality of his cracked corn.

Baltimore, Md.—A feed mixer, corn cracker and other feed machinery have been installed in an additional warehouse recently leased by George F. Obrecht, Inc., manufacturers and dealers.

MICHIGAN

Lacota, Mich.—McKay & Jones have purchased the Lacota Feed Mill from Frank Deming.

Battle Creek, Mich.—The Postum Co.'s plant here is employing more persons at present than it has at any time during the past 10 years.

Grass Lake, Mich.—Grass Lake Elvtr. Co. is installing a new Kelly Duplex Corn Cutter and Grader to improve the quality of its cracked corn.

Port Huron, Mich.—Frank W. Ward, at one time associated with C. A. Ward in a grain elevator here, died at the sanitarium in Battle Creek, where he had been a patient for two years, on Mar. 10, at the age of 75 years. He had also been associated with G. H. Ward & Co., grain and stock brokers of Detroit.

MINNESOTA

Westport, Minn.—E. H. Pfeningner's elevator sustained windstorm damage on Mar. 4.

Taunton, Minn.—A truck damaged the drive way on the elevator of the Taunton Co-op. Elvtr. Co. recently.

St. Paul, Minn.—Frank Jeffers, field representative of the Northwest Grain Ass'n, died Mar. 4. He was 61 years of age.

Sacred Heart, Minn.—A one-ton Cyclone Vertical Batch Mixer has been purchased by the Kellogg Commission Co. for its plant here.

Rogers, Minn.—The Broker Grain Co. is installing a Kelly Duplex Grinding Mill, a corn sheller, and making some other minor improvements.

Ellendale, Minn.—The Ellendale Farmers Milling & Elvtr. Co. has installed a new one-ton feed mixer, replacing a mixer of half that capacity.

Mankato, Minn.—The Hubbard Milling Co. sustained loss to its stock stored at this location from fire of unknown cause at 12:20 p. m. on Mar. 4.

Glencoe, Minn.—J. J. Prelvitz, of Hector, has been appointed manager of the Farmers & Merchants Milling Co.'s elevator, succeeding the late Frank J. Hosch.

Jackson, Minn.—O. T. Lande, manager of the Farmers Co-op. Assn's elevator, resigned recently and has been succeeded by Bernie Hanson, who takes charge Apr. 1.

East Grand Forks, Minn.—A new horizontal revolving drum Daisy Batch Mixer is being installed by the Farmers Elvtr. Co. The equipment was sold by R. R. Howell & Co.

Round Lake, Minn.—M. F. Wolf, manager of the B. B. Anderson elevator for the past 10 years, has resigned, wishing outdoor work for a change, and has been succeeded by George Benson, of Mendota, who will move his family here as soon as a suitable residence can be found.

Oshawa, Minn.—A 40,000-bu. up-to-date iron-clad elevator has recently been completed for the National-Atlas Elvtr. Co. at this point by the T. E. Ibberson Co. The foundation is solid

slab reinforced with steel bars, and the elevator has a total of 16 bins. The receiving scale is 26x9 feet, 20-ton capacity, with a 68-inch dump. The shipping scale is a 100-bu. hopper scale. The office, attached to the driveway, has three rooms, one of which is to be used only for testing and weighing.

Rothsay, Minn.—The Farmers' Grain & Mercantile Co. has let the contract to the J. H. Fisch Co. to design and build a new 18,000-bu. seed storage and cleaning plant adjacent to its present large elevator here. The contract also includes dismantling the north elevator at Rothsay. The materials from the old elevator will be used in the new plant. The new building will have a full concrete basement, seven feet deep. The side wall and roof of the new building will be covered with 26-gage galvanized iron; the new building will be 24x30 feet by 65 feet high. The present office building will be moved about 30 feet north and the new building will be erected where the office now stands.

DULUTH LETTER

Duluth office employees of the Cargill Grain Co. motored to Minneapolis, Mar. 21, for a visit with the Minneapolis force. Various entertainment was provided.—F. G. C.

Temporarily at least, the Duluth market will not change its trading hours, opening 9:30 a. m. and closing 1:15 p. m. daily, except Saturday, when the close will be at noon.—F. G. C.

A. H. Smith, age 74, died Mar. 4 at Vancouver, B. C. Mr. Smith was a member of the Duluth Board of Trade from 1901 to 1908, when he left to engage in the grain business at Winnipeg.—F. G. C.

J. F. Barry, Board of Trade manager for the Thomson & McKinnon Co., and J. A. MacInnes, manager of the Occident Terminal, Division of the Russell Miller Milling Co., motored to California for rest.—F. G. C.

Work of getting boats wintering here conditioned and fitted out for spring operations has begun on a small scale. Vessel owners probably will not hurry preparations, because of the heavy ice conditions, tending to delay opening of navigation. The harbor is ice-blocked to a depth of over 30 inches and a field extends out into Lake Superior for over 30 miles. The average opening of navigation is around Apr. 20, when boat and cargo insurance goes into effect. Only about one-third of the storage capacity is filled and vesselmen claim not much of the holdings are sold.—F. G. C.

MINNEAPOLIS LETTER

Leary Grain Co., incorporated; capital stock, \$25,000; incorporators: W. S. Leary, C. P. Leary and G. L. Cagley. This is an old, established company.

Minneapolis, Minn.—Recent new members of the Chamber of Commerce include H. W. Manuel, grain buyer for the Pillsbury Flour Mills Co., Wichita, Kan.

The condition of David D. Tenney, pres. of the Tenney Co., grain firm of this city, who is in St. Francis Hospital, Miami Beach, Fla., is reported as very serious.

The Dreyfus Co. has let the contract to the Jno. S. Metcalf Co. for a reinforced concrete working house between two storage units on the C. & G. W. R. R. The new head house will be 50x50x200 feet and contain one receiving and one shipping leg of large capacity and a cleaner leg of smaller capacity, two 2,500-bu. hopper scales, several cleaning machines and a passenger elevator, all electrically operated. In the two pit track shed will be a carpuller, door openers, shovels and a car spout.

Investigation requested by the Farmers National Grain Corp. into alleged slow delivery of wheat was made by the terminal elevator committee of the Chamber of Commerce, which reported that Concrete Elevator No. 1 of the Van Dusen-Harrington Co. contains sufficient wheat of contract grade to cover all outstanding warehouse receipts. On receipt of the report, the Farmers National shifted its complaint, making a protest against the delivery regulations of the Chamber of Commerce.

MISSOURI

Salem, Mo.—A midget flour mill was recently installed by the Hughes Milling Co. here.

St. Joseph, Mo.—On Mar. 2 J. C. McFarland, treas. of the Lipscomb Grain & Feed Co., of this city, died from a heart attack.

Salem, Mo.—The plant of the Salem Roller Mills is being taken down and a hotel and theater building will be erected on the site.

St. Louis, Mo.—In order to advertise this market, the St. Louis Merchants Exchange will sponsor a monthly publication, and to get a good name for it, a contest was conducted, closing on Mar. 14.

St. Louis, Mo.—Samuel Taylor Marshall, for 47 years in the grain commission business in this city, died Mar. 1 of infirmities of age, at his residence in Kirkwood, at the age of 76 years. From 1885 until 1910 he was a member of the commission firm of Fresch-Marshall Grain Co., later becoming associated with the Nanson Commission Co. until his retirement four years ago. He was a member of the St. Louis Merchants Exchange for many years. Mr. Marshall was a great grandson of Chief Justice John Marshall of the U. S. Supreme Court.

Westboro, Mo.—We have leased the elevator at Westboro, Mo., from the Farmers Elvtr. Co. and will conduct a general grain, feed, seed and coal business. Rudy Beckman will be the manager in charge. Our lease permits us to install such machinery as we may see fit, including shellers, cleaners, grinders, etc., and we expect to make any installation that business requirements demand.—Geiger Grain Co., C. A. Geiger (St. Joseph, Mo.).

Official Brown-Duvel

MOISTURE TESTERS

and a complete line of grain and seed testing equipment. Every item guaranteed up to government specifications.

HARRY B. OLSON

ASHLAND BLOCK

CHICAGO, ILL.

Increase Your Sales

Mail Samples of Feed to Your Local Customers.

Use
SPEAR
Sampling
Envelopes

Available in Small Quantities

Manufacturers and Printers of Spear Sample, Seed Packet, Commercial and Catalogue Envelopes.

Write for samples and prices.

John A. Heinrich, Envelopes

110 Washington Ave. North,
Minneapolis, Minn.

KANSAS CITY LETTER

The Kansas City Board of Trade voted to change its time schedule to conform with Chicago, which is now on eastern standard time. Trading on the exchange here will begin at 8:30 a. m., central time in Kansas City, and close at 12:15 p. m.

After being associated with the Continental Grain Co. for about 10 years, Samuel S. Carlisle has resigned as vice-pres. Fred W. Lake and Gustave Eisemann are the vice-presidents in charge of the local division of the company.

A very interesting collection of colored motion pictures depicting the history of grain production, harvesting and marketing and of the development of grain exchanges, has been assembled by the public relations department of the Kansas City Board of Trade. It will be available for schools and other groups.

Kansas City, Kan.—The \$300,000 bonds voted last November by this city for the huge grain terminal project here, have been ruled legal in district court, and the Wyandotte Loan & Investment Co. and its president, Fred Robertson, who challenged the legality of the bonds in a suit, have given notice of an appeal to the State Supreme Court. Meanwhile, the elevator project, for which the PWA has allocated a \$1,456,000 loan and grant, is held in abeyance.

Additional grain storage of 500,000 bus. capacity, consisting of 16 concrete tanks, 19 feet 10 inches in diameter and 109 feet high, with nine interstice bins, will be erected at the Rodney Milling Co.'s plant here, giving it a total grain storage capacity of 1,350,000 bus. Included in the grain handling equipment of the new addition will be 30-inch belt conveyors with anti-friction idlers and electric motor drives. Horner & Wyatt designed the addition and will supervise construction. The Jones-Hettelsater Const. Co. has been awarded the contract. In addition to the new structure, the Rodney Co. will increase the handling capacity of its receiving elevator and install additional machinery. A dust suction system will be installed also.

MONTANA

Belgrade, Mont.—The Gallatin Service Co., a farmers co-operative which will buy feed and machinery in large shipments, has been formed here.

Columbus, Mont.—On Mar 9 a pail of tar was being warmed on a stove in the elevator of the Columbus Farmers Elevator Co. The tar boiled over, causing a fire, which damaged the property.

Miles City, Mont.—M. L. Milbauer, for a number of years manager of the local elevator and mill of the Montana Flour Mills Co., resigned recently and has been succeeded by Ed Hegna, who has been transferred to this point from the company's elevator at Winnett.

Sidney, Mont.—The Farmers Elevator Co.'s elevator burned at 5:30 p. m., Mar. 9; loss, approximately \$32,000; covered by insurance. Destroyed with the building was 8,000 bus. of wheat, \$2,000 worth of flax, \$2,500 worth of oats, \$150 worth of barley, \$900 worth of corn, and, in an adjoining shed, \$200 worth of hay. A defective wire was believed to have been the cause of the fire. The records of the company were saved. For the present the company has rented the Occident elevator, which has not been used for two years, and arrangements may be made to buy or lease this house. It may be decided to build a new elevator on the site of the one destroyed. The company was organized in 1913, at which time the elevator was built.

NEBRASKA

Omaha, Neb.—Minute Mills, incorporated; capital stock, \$10,000; incorporators: Alan McDonald and T. C. McKnight.

Atlanta, Neb.—Ira Rhodes has purchased an interest in the Snyder Bros.' elevator here, and has succeeded Jasper Case as manager.

Gothenburg, Neb.—It is reported that the local Chamber of Commerce is seeking to have alfalfa feed mill located here.

Plattsmouth, Neb.—Shamblen & Helm Co., milling concern of Omaha, has leased the Alfa-Maize Bldg. here and will open a feed business.

Lindsay, Neb.—F. E. Walters, manager of the Farmers Co-op. Elevator Co.'s elevator here for the past 17 years, has resigned, effective Apr. 1.

Graf, Neb.—The Farmers Grain Co. at this point is closing the company's affairs. The elevator and other property of the company have been sold.

Wolbach, Neb.—Harold L. Nielsen has been appointed manager of the Farmers Co-op. Elevator Assn's elevator, and took over his new position on Mar. 2.

Humboldt, Neb.—O. A. Cooper & Co. are installing a new Kelly Duplex Vertical Feed Mixer. It is motor driven, with a capacity of one ton, and has floor level feed.

Rushville, Neb.—The Rushville Roller Mills have improved their feed processing equipment by the installation of a ½-ton Cyclone Vertical Batch Mixer, manufactured by R. R. Howell & Co.

Wood River, Neb.—The elevator building and equipment of the Wood River Co-op. Grain Co. was bot by Gus Holling, a farmer near here, at sheriff's sale held Mar. 10. The consideration was \$2,500.

NEW ENGLAND

Moosup, Conn.—The Moosup Grain Co. is installing a new Kelly Duplex Vertical Feed Mixer. The machine has one ton capacity, is equipped with motor drive, and has floor level feed.

Malden, Mass.—William H. Cunningham, 83, retired grain dealer and prominent citizen of this city, died of a heart attack at his home here, funeral services being held Mar. 17. Born in Malden, he was for years affiliated with the W. H. Cunningham Co., which at one time was one of the largest grain concerns in New England.—L. V. S.

Needham, Mass.—Howard A. Crossman, of Hampton Falls, N. H., who was in the grain and hay business in Needham for 40 years, died while on a pleasure trip to the Hawaiian Islands, according to news reaching Boston a few days ago. Born in Hopewell, N. H., in 1864, Crossman went to Needham in 1885, retiring in 1925 and taking up his residence in Hampton Falls.—L. V. S.

BOSTON LETTER

Steamer Hagen brot 1,000 bags of malt to Boston from Hamburg and the steamer Black Condor brot 500 bags from Antwerp.—L. V. S.

During February a total of 457 tons of mill-feed were received at Boston, according to the Grain & Flour Exchange. Other receipts include: 270,600 bus. wheat, 11,200 bus. oats, 9,500 bus. malt, 277 bbl. corn meal, 18,815 cs. and 3,015 sacks oatmeal. Flour receipts for the month were 104,655 bbls.—L. V. S.

Members of the Boston Grain & Flour Exchange voted unanimously at a special meeting called for the purpose, to ratify the proposal to change the charter of the organization to permit establishment of a securities division, and application will be made to the state commissioner of corporations for the change in the charter. Following the special meeting, the membership maintenance com'te met with President Carl J. B. Currie for consideration of Currie's plan for increasing membership in the Exchange.—L. V. S.

At the first luncheon-meeting ever held by the Boston Grain & Flour Exchange, Raymond F. Bohman, of Gardner, Mass., general chairman of the National Com'te for Prevention of Government Ownership of Railroads of the National Industrial Traffic League, bitterly opposed any further encroachment of government in business. He urged the grain, feed and flour men to route their goods by railroad, arguing that an increase of only 15% in traffic would be enough to put the railroads on the profit side of the ledger. Federal ownership, he said, would be a catastrophe to the American nation and the people, and called on the grain, feed and flour trade to do their part to prevent it.—L. V. S.

NEW JERSEY

Bridgeport, N. J.—An increasing feed business necessitated the taking over of the two-story building adjoining his plant, by George W. Weitlauf, who is remodeling it for his own use.

NEW MEXICO

Hagerman, N. M.—The bin storage capacity of the Pecos Valley Alfalfa Milling Co.'s local feed mixing plant was recently increased.

NEW YORK

Cuylerville, N. Y.—An alfalfa mill, having a capacity of three tons per hour, is to be built at this point by the Genesee Valley Alfalfa Corp., of Avon, N. Y.

STRATTON GRAIN CO.

GRAIN and FEED
MILWAUKEE, WIS.

CHICAGO, ILL.

ST. JOSEPH, MO.

NEW YORK, N. Y.

Operating Elevators at

Milwaukee, Wis.

Depot Harbor, Ont.

Chicago, Ill.

Schneider, Ind.

St. Joseph, Mo.

Savanna, Ill.

TOTAL STORAGE CAPACITY 10,000,000 BUSHELS

BUYERS AND SELLERS OF GRAIN
SPOT & "TO ARRIVE", CONSIGNMENTS

MILL FEEDS—FEED PRODUCTS—BY-PRODUCTS

Future Orders Solicited

ANYTHING YOU NEED

to put your elevator in tip-top shape
can be bought from us.

PRICE AND QUALITY GUARANTEED TO BE O. K.
SEND YOUR ORDER TO

YORK FOUNDRY & ENGINE WORKS
YORK PHONE "7" NEBR.

New York, N. Y.—New members of the Produce Exchange include Thomas F. Bush, of Waco, Tex., and Roy Betts and Edward N. Townsend, Jr., of this city.

Buffalo, N. Y.—E. B. Collard, pres. of the Distributors Feed & Grain Co., of this city, was distributing cigars recently among his friends. It's a boy and his name is Peter Collard.

Wilson, N. Y.—James Ellsworth Pettit, 67 years of age, who had operated a grain and coal business here for 40 years, died at his home on Mar. 7, from pneumonia. Mr. Pettit was one of the most highly respected citizens of this place and had spent his entire life in this village. He was the son in the firm, S. H. Pettit & Son.

NORTH DAKOTA

Grand Forks, N. D.—A new member of the Farmers Grain Dealers Ass'n of North Dakota is Whelan's Elvtr., of St. Thomas, N. D.

Rock Lake, N. D.—At 11 p. m. on Mar. 15 the elevator and stock of the Farmers Grain Co. were destroyed by fire of undetermined cause.

McVie, N. D.—Norman J. Boyum, of Brock- et, N. D., has been appointed manager of the Swanston Elvtr., succeeding H. H. Knauss, resigned.

Rushville, N. D.—The Rushville Roller Mill has recently installed a new feed mixer and has stocked the necessary ingredients for a full line of concentrated feeds for livestock.

Stanley, N. D.—The Arnold Grain Co. is reported to have sold its elevator here to the Occident Elvtr. Co., the transfer to be made Apr. 1. Franklin Taylor will manage the elevator for the new owners.

Rolla, N. D.—The W. M. Elliott Independent Elvtr. is being improved by the addition of a direct-connected geared head drive and Fairbanks-Morse Motor. The equipment was sold by R. R. Howell & Co.

Hillsboro, N. D.—Gilman Hovland has been appointed manager of the Monarch Elvtr. Co.'s local elevator, succeeding W. M. Ferguson, who was recently promoted to the position of district superintendent by the company.

Neché, N. D.—The Kellogg Grain Commission Co.'s elevator at this point burned early this month; loss, estimated at \$15,000; covered by insurance. The house contained 9,000 bus. of grain. The fire started at the top of the elevator.

Pleasant Lake, N. D.—The St. Anthony & Dakota Elvtr. Co., whose local elevator burned late in January, as previously reported, recently received bids on the construction of a new elevator, reported as probably of frame construction.

Hazleton, N. D.—Contract has been awarded by the Occident Elvtr. Co. for the construction of a new elevator, feed mill, warehouse and coal shed, with standard elevator equipment, replacing the fire loss of last January, to the Hogenson Const. Co.

OHIO

Cortland, O.—A new feed mixer was recently installed by the Trumbull Farm Buro.

Galloway, O.—Wind damaged the Grove City Farmers Exchange Co.'s plant on Mar. 13.

Rosewood, O.—The Rosewood Grain Co. recently installed a Sidney Kwik-Mix Feed Mixer.

New Vienna, O.—Bernard T. Johnson is installing a motor driven Kelly Duplex Cracked Corn Machine in his elevator.

Berea, O.—Machinery for the manufacture of soybean flour is being installed in the recently increased plant of the Berea Milling Co.

Jackson, O.—Ramsey's Feed Stores, of Portsmouth, O., have taken over the mill of Peters Flour & Feed Co. at this point, and have made Lou Peters manager.

Hillsboro, O.—R. H. Tolle, of the R. H. Tolle Co., who has operated an elevator here for the past 20 years, has sold his business to the Ubiko Milling Co., of Cincinnati.

Kensington, O.—Frank P. Faulk, pres. of the Faulk Flour & Grain Co. of this place and Calcutta, O., died early this month, at the age of 77 years, following a brief illness.

St. Louisville, O.—Hamilton & Son have recently installed a new Kelly Duplex Corn Cutter and Grader to handle the season's cracked corn business, which promises to be good here.

Quincy, O.—The Quincy Grain Co. has purchased a 15-ton scale from the Sidney Grain Mch. Co.

Maplewood, O.—On Mar. 4 and 5 a ground in the motor wiring in the plant of the Andrews Grain Co. caused hot spots on iron siding and burned hole thru bin. Three fires broke out in two days.

Versailles, O.—Lloyd Plessinger, of Greenville, has been appointed manager of the Citizens Elvtr. Co.'s elevator at this point, succeeding William A. Subler. The change took place early this month.

Gibsonburg, O.—The Gibsonburg Elvtr. Co. is making extensive improvements at its plant, including tearing down sheds and laying a new foundation under the large storage building. Because of increased business the company must have more storage space.

Fremont, O.—The Great Lakes Sugar Co., which last year started the production of alfalfa meal at its local plant, expects to double its output this year, and with that purpose in view will contract for a total of 8,500 acres, covering first, second and third cuttings.

Toledo, O.—Fred Mayer, long a partner in J. F. Zahm & Co., and for 45 years a member of the Board of Trade and its predecessor, the Produce Exchange, has been elected to Honorary Life Membership. Fred is now with H. W. De Vore & Co. His host of friends in the trade wish him 45 years more of pleasing service to the grain trade.

Perrysburg, O.—A 40-h.p. motor at the Perrysburg Grain & Supply Assn's elevator on Mar. 2 was running a capacity load and the wires became hot and ignited the insulation covering. The fire was extinguished before the arrival of the fire department, the loss being confined to the motor, which was not so badly damaged that it could not be repaired.

Clarksfield (r. d. Wakeman), O.—P. H. Fulstow, Norwalk farm supplies merchant, has sold his two elevators at this point and at Hartland (r. d. New London) to R. D. Stryker, of Collins. These elevators have been owned by Mr. Fulstow and his predecessors since about 1900. Mr. Stryker and his son, J. P. Stryker, of Wakeman, will operate the elevator properties. They are experienced elevator managers.

Columbus, O.—William W. Cummings, sec'y of the Ohio Grain, Mill & Feed Dealers Assn., and Robert F. McAlister, formerly of the McAlister-Robinson Co., this city, have entered into a partnership and opened offices at 30 East Broad St. for the conduct of a grain, feed and oil brokerage business. They are also distributors in Ohio for manufacturers of various commodities used in mixing feed. The firm name is Cummings & McAlister.

Farmdale, O.—It was the Kinsman Feed & Supply Co.'s plant at this point and not the plant at Kinsman (as reported erroneously in the daily press) that burned during the night of Feb. 29. Fire was discovered at about 11 o'clock on the roof of the elevator part of the building. All the machinery was ruined and over 100 tons of feed burned. Loss, approximately \$10,000; partial insurance. The sheds containing several hundred tons of feed were disconnected from the burning mill, preventing the blaze from spreading. This business was established here 60 years ago, beginning as a feed store. Business will continue as usual at Farmdale, with complete stocks of feed, coal, etc., the grinding being taken care of at the Kinsman and Wick (r. d. Williamsfield) mills of the company.

OKLAHOMA

Nash, Okla.—The Nash Equity elevator is being taken down to make way for a new concrete elevator, which will be completed in time to handle this year's wheat crop.

Vinita, Okla.—The Baxter Mill & Elvtr. has started construction of a new up-to-date elevator on the site of the house that burned last December, as previously reported. It is expected to be finished in time for the new crop.

Shawnee, Okla.—The local Chamber of Commerce has purchased an acre of land two and a half miles west of Shawnee as the site for a branch dehydrating plant of the W. J. Small Hay & Grain Co., of Neodesha, Kan. Invested capital of the new business will be \$25,000. The plant will absorb the alfalfa produced on 6,000 acres. Three buildings will be required, one 60x100 feet, one 50x60 feet, and one large enough to house the machinery.

Receiving Books For Grain Buyers

Wagon Loads Received. A good form used extensively in recording wagon loads of grain received from farmers. Tare weight is entered immediately under gross to facilitate subtraction. Contains 200 pages of linen ledger paper, and is ruled 20 lines to a page, thus accommodating 4,000 wagon loads. Separate pages may be devoted to each kind of grain to each farmer, or wagon loads may be entered in the order received. Well bound in cloth, with keratol back and corners. Order Form 380. Price \$2.50. Weight 2½ lbs.

Receiving and Stock Book for keeping a record of each kind of grain received in separate columns, so buyer may easily determine total amount of any kind of grain on hand. Size 9¼x11½, 200 pages, with a capacity for 4000 wagon loads. Well printed on linen ledger paper, bound in strong board with leather back and corners. Order Form 321. Price \$2.50. Weight 2½ lbs.

Scale Ticket Copying Book contains 150 leaves of scale tickets, four to a leaf. Each leaf folds back upon itself, so that with the use of carbon paper, it will make a complete copy of the original on the stub, with one writing. Original tickets forming the outer half of leaf are machine perforated. Printed on bond paper, check bound, size 9¼x11, supplied with four sheets of carbon. Order Form 72. Price, \$1.30. Weight 2 lbs.

Grain Scale Book, a combined Journal and Receiving book with index. Each man's grain is entered on his own page, or a page may be allotted to each kind of grain received. Both debits and credits are posted to the ledger. Contains 252 numbered pages and index, size 10½x15½, and will accommodate 10,332 wagon loads. Printed on linen ledger, bound in extra heavy black cloth covers, with leather back and corners. Order Form 23. Price \$4.00. Weight 5 lbs.

Grain Receiving Register is designed for recording the receipts of wagon loads of grain. Loads may be entered in consecutive order, or different sections of the book may be devoted to different kinds of grain. Book contains 200 pages of linen ledger paper, size 8¼x14 inches, each of which is ruled for 41 entries, giving a total capacity of 8200 wagon loads. Well printed and substantially bound in full canvas. Order Form 12AA. Price \$2.50. Weight 8 lbs.

Duplicating Wagon Load Receiving Book, designed to facilitate the recording of number of loads from one farmer in a short time. Book contains 225 leaves, size 12x12 inches with 33 lines each, perforated down the middle; the inside half of the leaf remains in the book, and the outer half with the same ruling printed on the reverse side, folds back over the left half with carbon between. Outer half is given to farmer. It may also be used by line agents in making daily reports to headquarters. Check bound with canvas back, nine sheets of carbon. Order Form 66. Price \$2.60. Weight 4½ lbs.

Grain Receiving Ledger, may be used first as a Stock Book by posting the receipts daily, weekly or monthly from some other portion of this book, or from any other scale book, giving a page to the commodity handled; Second, as a patrons' ledger, by giving a full or half page to each patron; Third, pages may be used to enter each load of grain received in consecutive order under their respective commodity headings. The book contains 200 numbered pages with 44 lines each, and marginal index in front, size 8¼x13½, ruled with the usual column headings, including Debit and Credit columns. Printed on linen ledger paper and well bound in black cloth sides with keratol back and corners. Order Form 43. Price \$3.00. Weight 2½ lbs.

Form 43XX contains 400 pages same as above. Price \$5.00. Weight 4½ lbs.

All Prices are for Chicago Delivery.
Postage Extra.

Printed and Supplied by

Grain & Feed Journals Consolidated
332 South La Salle St. Chicago, Ill.

PACIFIC NORTHWEST

Battle Ground, Wash.—H. Gregerson has about completed his new feed mill which replaces his former plant that burned in December, as previously reported in the Journals.

Portland, Ore.—The local office and also the Seattle office of the Bunge Grain Co. have been closed. The Spokane office was closed some time ago, as reported in the Jan. 8 Journals.

Genesee, Ida.—The Genesee Union Warehouse Co. has purchased two direct-connected geared head drives, manufactured by R. R. Howell & Co., for its No. 1 and No. 2 elevators.

Portland, Ore.—John Dickson, in the grain department of Balfour, Guthrie & Co., Ltd., died Feb. 6, following a major operation. Mr. Dickson was born near Arbroath, Scotland, about 56 years ago, and in early manhood moved to Canada. In 1903 he joined the staff of Balfour, Guthrie & Co., and has been with them in various capacities since.—F. K. H.

Condon, Ore.—L. J. Lucas, manager of the Condon Grain Growers Ass'n, was found dead Mar. 7, in the association's warehouse, with a wound in his heart. Mr. Lucas is survived by his wife and young daughter. A note on the body indicated suicide. He was born in Centerville, Wash., Mar. 3, 1890. He served with the 91st division in France.—F. K. H.

Portland, Ore.—At a recent meeting of the board of directors of the Oregon Feed Dealers Ass'n, complaints were presented from country grain dealers regarding the Portland cash market and the new system of quoting. Pres. Small, of the ass'n, announced appointment of a com'tee, to take up the question with the Portland Grain Exchange, with the following personnel: Herbert Elliott, Perrydale, chairman; Al Senders, Albany; John Shaw, Woodburn; Frank Murdoch, Monmouth, and O. W. Frum, Halsey.

Spokane, Wash.—Fred E. Davis and Jack H. Roberts, grain dealers, who formed the Roberts-Davis Co. last summer, have formed new connections. Mr. Davis has leased the Roberts-Davis house from the Roberts-Lukins Warehouse Co., operating it under the name of the Fred E. Davis Co., as a feed grain and warehouse business. He is installing treating and feed milling machinery. Mr. Roberts will give his entire time to supervision of the country facilities of the Roberts-Lukins Warehouse Co., with headquarters in the Columbia Bldg., this city.

Lewiston, Ida.—The Lewiston Grain Growers, Inc., has sold the old Vollmer-Clearwater Co.'s 320-barrel flour mill here to the North Pacific Grain Growers, Inc., Spokane, according to advices of Manager J. W. Shepard. The mill company, incorporated in 1893, was purchased by John P. Vollmer in 1904 and was operated by the Vollmer-Clearwater Co. until last August, when the mill and the string of Vollmer warehouses were sold to Lewiston Grain Growers. The mill now goes to the North Pacific Corp., which is made up of 63 local units in the Northwest with which Lewiston Grain Growers is affiliated.—F. K. H.

PENNSYLVANIA

Philadelphia, Pa.—Applicants for membership in the Commercial Exchange include Max Goldberg.

SOUTH DAKOTA

Egan, S. D.—A large seed cleaner has been added to the facilities of the Farmers Elevator Co. The equipment was purchased thru R. R. Howell & Co.

Yankton, S. D.—The top of the DeCamp Elevator was discovered to be on fire at 8 a. m., Mar. 6, but fortunately the blaze was put out before much damage was done.

Veblen, S. D.—C. B. Satre, of Claire City, has bot the business of the Farmers Grain & Fuel Co. from A. Hendrickson, and will, on June 1, take control of the elevator.

Lemmon, S. D.—Warren J. White, pioneer grain buyer of this section, died at his home here early this month. For the past 10 years he had been connected with the Lemmon Farmers Equity Exchange as manager.

SOUTHEAST

Florence, S. C.—Installation of equipment for a small flour mill is planned by the Ashcroft Milling Co.

Rutherfordton, N. C.—A three-story mill building is under construction here for the Yelton Mfg. Co.

Laurinburg, N. C.—Additional grain storage is contemplated by the Laurinburg Milling Co., which recently doubled the grain storage capacity of its mill. Equipment for making mixed feeds will be installed also.

TENNESSEE

Humboldt, Tenn.—C. R. Lambert is now operating the Madden & Doerr Feed Mill, which he recently purchased.

Nashville, Tenn.—The Haymarket Mills, which has been in business here for many years, has built a new plant, replacing the fire loss of last December.

Nashville, Tenn.—The Haymarket Mills has replaced its plant that was destroyed by fire last December with a new one. This company has been doing business here for 42 years.

TEXAS

Athens, Tex.—The Patterson Mill has been taken over by F. L. Crutchfield, who is now operating it.

Kemp, Tex.—Machinery for a feed and grist mill is being installed in the addition recently erected by Huston Bros. to their gin.

Denton, Tex.—A feed and cornmeal mill is under construction here for the Denton Produce & Poultry Co., which has bot the machinery in the Lewisville (Tex.) flour mill and is having it moved to this point.

Ft. Worth, Tex.—Grain dust exploding in a conveyor of the Purina Mills here, caused damage of about \$2,000, most of which, however, was caused by the water used in extinguishing the attendant fire, which did very little damage.

UTAH

Ogden, Utah—Death came to Hyrum C. Farrell, owner and operator of the Utah Grain & Elevator Co. here, on Mar. 15. Mr. Farrell, who was 65 years of age, had managed the business for 28 years.

WISCONSIN

Bloomer, Wis.—The Bloomer Farm Products Co. has recently installed a new Kelly Duplex Corn Cutter and Grader, with motor drive, at its elevator.

Greenbush, Wis.—Jack Krug has bot the interest of his partner, George E. Stannard, in the Greenbush Milling Co., which they established here seven years ago. Owing to continued ill-health, Mr. Stannard found it advisable to make the change.

Milwaukee, Wis.—The directors of the Milwaukee Grain & Stock Exchange have voted to conform to the trading hours of the Chicago Board of Trade, which advanced its schedule in agreement with eastern standard time, which that city has adopted.

Supply Trade

Chicago, Ill.—Completing the reorganization and consolidation begun in 1932, the Foote Bros. Gear & Machine Corp. recently announced it had taken over all assets of the Foote Bros. Gear & Machine Co.

Akron, O.—Taxes paid by the B. F. Goodrich Co. during 1935 were more than double the earnings on the preferred and the common stock. How the bureaucrats do enjoy spending other people's hardearned cash.

Chrisney, Ind.—Bernard Hartz, Sr., has received a patent right on a machine devised for removing wild onions and garlic from wheat and grains. Almost 100% of the above are removed.—W.B.C.

La Crosse, Wis.—Everyone interested in perfect lubrication will find much information of help in *The Pyroil News* published monthly for the reduction of friction. Copies are free to JOURNAL readers.

Chicago.—A new catalog, No. 1520, 40 pages, 6-in. x 9-in. page size, beautifully illustrated, has been published by Link-Belt Company, on Link-Belt anti-friction bearing units available in streamlined pillow block, hanger, take-up, flanged, duplex and special mountings.

Chicago, Ill.—Arthur J. Lindquist, for 17 years associated with Macdonald Engineering Co. in the design and construction of grain elevators, has identified himself with the Cement-Gun Construction Co. as engineer, specializing in the repair, waterproofing and maintenance of concrete structures, particularly grain tanks.

A veteran advertising man once remarked that the most difficult of all tasks was to get under the skins of people. In a way, perhaps, this could be interpreted as a thoughtful rebuke to some of the stilted copy and appeals in vogue in certain quarters. Or, further, if you would have people warm to your messages and react favorably toward your appeals then warm up considerably to them in your advertising!

It is quite obvious that the problem of disposing of the Canadian wheat surplus is not going to be solved this season, barring unexpected developments. The likelihood is that when the situation can be reviewed retrospectively next December, it then will be realized that Canada will have to wait a long time for as favorable an opportunity to sell wheat as that which has existed since last August. Only a major crop disaster in Europe is likely to broaden the demand for Canadian wheat during the season 1936/1937, as compared to 1935/1936.—W. D. S. Sanday of Thomson & McKinnon.



WORLD'S LARGEST ELEVATOR

13,000,000 BU.—ALBANY PORT DISTRICT COM., ALBANY, N. Y.

Operated by

CARGILL GRAIN CO., MINNEAPOLIS, MINN.

Equipped with THE GRAIN DRIER WITHOUT A BOILER

That's a Randolph—operated by oil.

Manufactured by

O. W. RANDOLPH CO., TOLEDO, OHIO, U. S. A.

Field Seeds

Eagle Grove, Ia.—The Henry Field Stores, Inc., has leased a building here.

"You can't sow wild oats and not get the seedy look."

Marshall, Minn.—The Porter Seed Store has been opened.

Custer, S. D.—The Gurney Seed Co. has purchased a building in which to open a seed house.

Syracuse, N. Y.—The New York State Seed Ass'n will hold its annual meeting here June 22.

Bismarck, N. D.—The Dacotah Seed Co. will rebuild the part of its plant that recently burned.

Mercedes, Tex.—The Dodson & Blackstone Seed and Feed Store has been opened by Dodson & Blackstone, fruit packers.

Omaha, Neb.—The annual meeting of the Western Seedsmen Ass'n will be held Apr. 25 at the Fontenelle Hotel.

Fort Madison, Ia.—J. S. Fetherston has bot the Wilson Seed Co. and will operate it under the new name of the Fort Madison Seed & Feed Co.

Portland, Ore.—John Jacob Butzer, seedsman, died Mar. 8, aged 64 years. He was born at Louisville, Ky., and came to Portland as a small boy, with his parents.

Grand Forks, N. D.—The Grand Forks Seed Co. has been incorporated with \$100,000 capital stock by Frank C. Smith, pres.; Thos. J. Smith, vice pres., and Harold F. Smith, sec'y.

Milwaukee, Wis.—Paul H. Baermann, aged 57 years, died Mar. 19 at St. Joseph's Hospital. He was born at Muskegon, Mich. and after 16 years with Currie Bros. Co. established his own seed business 10 years ago.

Eugene, Ore.—Farmers living in the western part of Lane County have started a co-operative organization to market their bent grass seed. Included in the new com'ite are Wayne Waite, A. C. Jackson, Ralph Iversen and Geo. T. Schroeder.—F. K. H.

Sullivan, Ill.—Farm buro officials meeting here recently decided to organize a new state soybean ass'n, to replace the old Illinois Soybean Marketing Ass'n, which seems not to have been successful. The new organization is to have other purposes than marketing.

Country elevator operators are urged to warn farmers whom they contact and have local newspapers also caution farmers to avoid buying seed from truckers unless the containers in which the seeds are offered are labeled with proper tags fixing the responsibility for quality and test.

Topeka, Kan.—R. I. Throckmorton, agronomist, Kansas State College, has been chosen chairman of the recently organized Kansas Seed Council. Among the 14 members of the Council are August Mangelsdorf, Atchison; Harry Coe, Topeka; Max F. Wilhelmi, Lawrence; Paul Walthers, Salina, and L. S. Congdon, Sedgwick.

Thick plantings of sorghum broadcast, if kept up for several seasons on root rot infested soils, will discourage the growth of weeds that harbor the root rot disease and the grazing and hay crops will supply some income from such areas during the time the root rot fungus is being starved and the land will be gradually improved for future general crop production.

Arroyo Grande, Cal.—L. C. Routzahn passed away Mar. 11. Removing from Three Rivers, Mich., in 1892, where he was a Lutheran minister, Mr. Routzahn took charge of the seed growing business established a few years earlier by Mrs. Routzahn's father and changed the name from McClure Seed Co. to Routzahn Seed Co. He was well known in the seed trade.

Aberdeen, S. D.—Iver J. Gibbs, a farmer of Claremont, bought 166 bus. of seed oats from a neighbor. When the seed failed to germinate Gibbs sued John Phillips of Houghton, from whom he bought the seed, for \$630 damages for labor and cost of new seed. Before going to trial in the circuit court the two farmers agreed upon a settlement. He had paid \$116.35 for the worthless seed.

Bluffton, Ind.—The wet fall and the cold freezing weather of the months that followed have had their effect on the seed corn situation. Tests have revealed that the fertility of most corn stored by farmers has been killed by the unusual cold weather. A few farmers in Wells County have already paid as high as \$4 for seed corn; in each case their own corn was tested with no results.—A. F. McCord.

Decatur, Ill.—Corn growers are urged to give special attention to the kind of seed used in planting the new crop this year, as a big percentage of the corn reserves on farms has poor seed qualities. In some cases, early frost damaged germination, but the principal injury to quality is the result of the high moisture content, together with the long periods of sub-zero weather.—Baldwin Elevator Co.

"Test barley seed and seed oats before they are planted this year," is the suggestion of W. D. Swope of the New York State College of Agriculture, who notes that both crops suffered damage last year. "It would not be safe to plant them without germination tests, unless certified seed is used. Some seed dealers whose supply may run short may import Pacific Coast varieties of seed oats, but with the exception of the variety Victory, they are not well adapted to New York conditions."

Chicago, Ill.—The seed business has shown considerable improvement in the past two weeks, due to more favorable weather for Spring sowing. The timothy seed market is inclined to be easy; demand so far below normal. Clovers, alsike and alfalfa are firm with active demand. Future prices will be governed, as usual, by the demand for the different kinds of seeds during the next four or five weeks, but indications are that there will be carryovers in some commodities—such as timothy and red top—while stocks of others should be well cleaned up.—The Albert Dickinson Co.

College Station, Tex.—Ninety-five per cent of the grain sorghum grown in Texas is from proved varieties developed by the Texas station. Yellow seeded strains of kafir, hegari, and feterita have been developed and a red-spot resistant gene from Leota Red is being added to these promising strains. A tannin-free seed is being bred into red top cane. A yellow kafir-milo cross is ready for distribution and is a better forage type than milo. Red-spot resistance and sweet stem have been bred into sudan grass, but three or four years will be required before distributions are made.—A. D. Jackson.

Yakima, Wash.—All farm seeds are lower in price than last year and farmers will be able to make seedings at considerably less expense than in the spring of 1935. Yakima dealers are quoting Utah and Kansas alfalfa seed at 19 cents in 100-pound lots or 20c in broken lots. A year ago the price was 29 to 30c a pound. Oklahoma and California seed will be 1c lower. Grimm alfalfa seed will be 25 to 27c a pound. Red clover seed will be offered at 19 to 20c a pound. These prices are 5c lower than a year ago. White sweet clover seed will be 10c and yellow sweet clover will be 11c. Last year they were 15c. Pasture grasses are 5c a pound lower.—F. K. H.

Indianapolis, Ind.—Fred K. Sale, sec'y of the Indiana Grain Dealers Ass'n, writes: "Indiana, like practically all other of the larger corn producing states, is faced with a shortage of good seed corn. Unless seller has made registration with the State Seed Chemist, he can not offer grain for seed purposes on the basis of its germination or purity tests. Watch your step in this respect, thus preventing a possible reaction by the purchaser later, because of poor germination of the seed. Generally speaking, two year old native corn is testing much higher in germination than that produced on the last crop. The dealer has a wonderful opportunity available now in assisting farmer customers to secure good seed and particularly in assisting them in making germination tests of corn which they have laid aside for seed purposes."

Directions for Taking of Seed Samples

If a sample of seed for test is to be sent to a seed laboratory the following directions for securing the sample should be observed:

1. The minimum weight of seed forwarded for test should be approximately:

- (a) Two ounces (cupful) of grass seed of any kind or of white and alsike clover;
- (b) Five ounces (cupful) of red and crimson clover, alfalfa, millet, flax or seed of like size;
- (c) One pound (pint) of cereals or seed of like size.

2. Samples may be drawn:

- (a) With seed triers;
- (b) With long stickers;
- (c) By hand, taking approximately equal parts of the sample from at least three different places in the sack, including the top and opposite sides as near the bottom as practicable.

3. Samples should be drawn from each bag when there are not more than five bags in the lot, from every fifth bag when there are more than five bags, but never from less than five bags. All samples so drawn are combined into one composite sample.

Eleven wet corn millers ground 5,808,186 bus. of corn during February, considerably more than a year ago, as reported by the Corn Industries Research Foundation.

Directory

Grass and Field Seed Dealers

CRAWFORDSVILLE, IND.

Crabbs, Reynolds, Taylor Co., clover, timothy.

GREEN SPRINGS, OHIO

The O & M Seed Co., seed merchants.

PAULDING, O.

Stoller's Seed House, wholesale field seeds.

ST. LOUIS, MO.

Mangelsdorf & Bro., Ed. F., wholesale field seeds

SIOUX CITY, IOWA

Sioux City Seed Co., seed merchants.

Farmers Victimized by "Bargain" Seed

By H. R. KRAYBILL,

Indiana State Seed Commissioner

Farmers ordering seed by mail or purchasing it from outside of the state do not have the protection of the Indiana state seed law, which requires that all seed sold in Indiana, except that sold and delivered on the premises of the grower, be tagged with official Indiana seed tags.

Recently state inspectors secured a sample of so-called Grimm alfalfa that a farmer had purchased from one of these so-called "bargain" seed firms located outside of Indiana. An analysis of the sample showed a purity of only 81.7 per cent, a germination of 73 per cent and 4.5 per cent of hard seeds. The seed contained 36 curled dock and 27 dodder seed per pound, over 16 per cent of green bristle grass, and only about 59 per cent of pure seed that would germinate. It cost the farmer \$10.23 per bushel including freight. Based on the germination alone the seed was not worth more than two-thirds as much as good alfalfa. On this basis the farmer was paying at least at the rate of over \$15 for the equivalent of a bushel of alfalfa. He could have bought good seed from his local dealer for around \$16 per bushel and would not have infested his field with dangerous weeds. Beware of cheap seed advertised by these out of state so-called "bargain" seed houses.

Formaldehyde Too Strong for Weak Seed

Using the standard formaldehyde solution as a seed disinfectant the North Dakota Agricultural Experiment Station found that young wheat plants produced from light weight seed treated with formaldehyde were noticeably less able to push through the soil, and were lighter in weight and less vigorous than plants from untreated seed. However, Ceresan, a dry disinfectant, resulted in a distinct improvement in the plants produced, the seedlings being better able to push thru the soil and the young plants were heavier and more vigorous.

"Altho formaldehyde is an excellent disinfectant for smut, it often is injurious to seed," says W. E. Brentzel, plant disease specialist of the experiment station. "Growers who use it

to treat wheat have learned that it is necessary to sow more seed per acre, not only to offset swelling from the wet treatment, but also to make up for injured seeds. It is not uncommon to obtain an excellent yield from seed treated with formaldehyde, but the same yield may be obtained from sowing less seed if a non-injurious treatment is used."

Testing Seed Wheat More Necessary This Year

By W. W. BROOKINS, University of Minnesota

Grading, testing and treating seed wheat—desirable practices every year—are doubly desirable this year because of the damage done to the 1935 wheat crop by black-stem rust.

About 20 per cent, or one out of every five seed samples tested at University Farm this winter, has been unfit for planting. Samples of both plump and shriveled grain tested low in germination, but, in general, the plump seeds produced much more vigorous seedlings.

When light grain must be used for seed, fanning and grading out lighter kernels may increase the vigor of the remaining seed as much as 25 to 50 per cent. Before grading the entire lot of seed, however, it will be best to grade a small sample and try it for germination. This can be done either by submitting the sample to the State Seed Laboratory at University Farm, St. Paul, or by testing it at home. The soil method of testing is recommended in preference to the rag-doll or paper-doll method, because it gives a more accurate measure of the vigor of the seed.

If seed germinating as low as 70 to 80 per cent must be used, it will stand a much better chance of surviving the first few weeks in the soil if it is treated with New Improved Seme-san. This chemical, sold by most retailers, controls stinking smut; and also controls seedling blights more effectively than either copper carbonate or formaldehyde.

Thoro packing of the seed bed is urged, as this brings the soil into closer contact with the seed and gives it a quicker start.

Adaptation of Corn to Climate

The common opinion that corn varieties can not be removed from their places of origin and adaptation without loss of productiveness was not supported by experimental results of the experiment station at New Haven, Conn.

Study of yields of corn when moved from one to another locality in relation to the average yields in different regions led to the deduction that corn may be moved from a less favorable to a more favorable climatic region without loss of productive capacity, and usually with distinct gain, provided the length of the growing season permits satisfactory maturity. Conversely, most of the loss in productivity when seed corn is taken from one region to another is held to be due to less favorable conditions of climate.

Elevators Treat Seed for Farmers

Many local elevators of western and north-western Minnesota will treat grain for farmers this spring to aid in the control of smut and other seed-borne diseases, reports R. C. Rose, extension plant disease specialist, University Farm, St. Paul.

Forty-four such elevators installed seed treating machinery last spring, treating a total of more than 300,000 bushels for their patrons, he says. Others have signified their intention of putting in such equipment.

Altho the farmer, if he wishes, can treat his own seed grain, it costs him but little more to have it treated at the elevator, and the service saves him much inconvenience. Most of the elevators charge only three cents per bushel to treat seed, and of this amount 1½ to 2 cents per bushel represent the cost of material.

New Improved Ceresan is now recommended in preference to copper carbonate or formaldehyde, Mr. Rose says, because it controls seedling blights more effectively than other fungicides.

Because practically all seed wheat of the 1935 crop is light in weight, and much of the 1935 wheat and barley is scabby, the treatment of these kinds of grain is unusually desirable this year.

Testing Seed for Germination

The seed to be germinated should be mixed thoroly and the required number of seeds (100 seeds of grains and 200 of clovers and other small seeds) counted out just as they come.

The plate germinator is satisfactory and very simple to operate. The seeds to be germinated are placed between two thicknesses of folded blotting paper or cloth (heavy grade of muslin or canton flannel). This should be moistened and placed between ordinary tin or porcelain plates and kept in a warm room where the range in temperature is from approximately 85 degrees during the day to 65 degrees at night. The place selected for the test should not be too near a window, stove or register.

The time required for germination tests varies with different kinds of seed. Under favorable conditions grass and clover seeds begin to sprout in three or four days. The tests should be continued for ten days or two weeks. Every two days the tests should be examined and a record made of the number of seeds that have sprouted. Also the blotting paper or cloth must be kept sufficiently moist. The number of seeds which germinate out of the 100 seeds will give the percentage of germination.

SEED CORN

Yellow and White
Early Maturing Varieties

Carefully selected, and
graded seed, depend-
ably tested for germi-
nation.

Write, Phone, or Wire
for information and
prices.

GRAHAM GRAIN CO.
Terre Haute, Ind.

CRABBS REYNOLDS TAYLOR CO.
CRAWFORDSVILLE, IND.

GRAIN

Clover and Timothy Seeds
GET IN TOUCH WITH US

ED. F. MANGELSDORF & BRO.

Buyers and sellers of
Sweet Clover, Alfalfa, Lespedeza, Clovers, Timothy, Grasses, Fodder, Seeds, Sudan Grass, Soy Beans, Cow Peas
St. Louis, Missouri

FIELD SEEDS

WRITE OR WIRE FOR PRICES

SIoux CITY SEED CO.

Truck Service from the following warehouses:

Sioux City - - - - -	Iowa
Sioux Falls - - - - -	So. Dak.
Norfolk - - - - -	Nebr.
Carroll - - - - -	Iowa
Billings - - - - -	Mont.
Algona - - - - -	Iowa
Fairmont - - - - -	Minn.
Albert Lea - - - - -	Minn.

Samples Furnished On Request

The O. & M. Seed & Growers
Dependable Seed
Green Springs, Ohio

A certain feeling of satisfaction and confidence goes with the planting of O & M seeds. Their excellence, uniformity, dependability and yield have completely won over thousands who wouldn't think of accepting a substitute.

Write for catalog and prices.

Field Corn - Sweet Corn
Seed Oats - Garden Seed
Grass Seed

Seed Corn Treatment

By C. T. GREGORY of Purdue

There are two organic mercury compounds on the market that can be recommended for seed corn treatment. Either of these materials can be purchased from drug stores, seed stores, elevators, and possibly other places. They are made specifically for seed corn treatment.

Use two ounces per bushel of shelled seed corn and mix in some sort of closed container. Shake or revolve the seed with the dust, so that each grain will be thoroly coated. If possible, make some arrangements whereby the excess dust will sift from the seed corn. In some cases one ounce of dust has been found to be enough to cover a bushel of seed, but in this case an efficient treating apparatus must be used. To be safe, use two ounces of the dust, and then sift the excess dust from the seed.

The value of this treatment is that it kills the mold spores on the surface of the seed. In cold, wet soil these molds will rot the seedlings, causing uneven stands. However, this is all the treatment will do. It does not control. It will not prevent stalk rot later in the season and it will not prevent ear rots. It is valuable only to protect the seedling, but it is very valuable for that purpose, and is worth many times its cost.

After the seed corn is treated, it may be sacked and held until ready to plant; but such seed must be kept in a warm, dry place. If the seed gathers moisture, or if the sack gets wet, the treatment is very liable to injure the seedlings. It causes a dwarfed, thickened growth of the seedling.

Soybeans Not Adapted to Southwestern Climate

By A. D. JACKSON of Texas Exp. Station

The Corsicana Soybean Conference, sponsored by the East Texas Chamber of Commerce, was a most important meeting and one calculated to gradually develop the soybean as one of the crops to substitute or replace acreage released from cotton. The sense of the conference was universally, that in the promotion of this crop, the procedure should avoid a mushroom growth and should follow along the lines that would permit of sound development. The production of the soybean is attractive, in that a market practically as stable as that for cottonseed has already been established for the oil and the meal, which have many and varied uses. Current quotations range from 86c to 88c per bushel and about a million and one-half bushels were inspected for export.

Dr. E. B. Reynolds, of the Texas Experiment Station, presented results to the conference, showing that, over a period of years, the production of soybeans at the several substations has not been high, and in most cases less than yields of cow peas. The highest yield recorded is twenty-five bushels per acre for the Mammoth Brown at the Tyler Station in 1933, whereas, in 1934, it produced less than three bushels, and in 1935, less than one bushel per acre, indicating strongly that climatic conditions materially affect the production of seed of soybeans in this state. Similar or poorer results than those quoted for the Tyler station have been obtained at other stations in consecutive periods, ranging from three to five years. At Angleton, of nine varieties tested for four years, the best variety, Laredo, produced 14 bus. in 1934 and averaged 7.8 bus. At Beaumont, of seven varieties tested five years, Ootootan produced 21 bus. in 1932, but none of the varieties produced seed in three of the five years. At Chillicothe, of eight varieties, Easycook was best, with a yield of eight bus. in 1935, but in most cases no yields were secured. At Iowa Park, no variety produced seed in 1935, and the highest yield in 1932 was Laredo, producing six bus. per acre.

It should be borne in mind that there is abundant authoritative information from the Experiment Stations here in Texas to show that soybeans will not yield profitable crops year in

and year out, and it would be misleading to farmers if they should gain the impression that this is a crop that can be depended upon every year to produce profitable yields. This is not strange to anyone familiar with climatic conditions west of the Mississippi River, as it is generally known that climatic conditions are much more erratic west of the Mississippi River than they are east of it, and hence more uniform yields are secured year after year in Mississippi, for example, than in Texas. More uniform yields are secured in Ohio and elsewhere in the corn belt, where climatic conditions are more uniform. We must face the fact that we have different climatic conditions here in Texas than those existing elsewhere. As yet, apparently no soybean has been developed that can withstand these varied climatic conditions and always produce profitable crops.

Certified, Verified and Affidavit Seed

Certified seed is seed whose purity, germination and variety is certified to by some state certifying agency or an agency closely associated with some state office or department. The seed is shipped in sealed sacks with a certified seed tag attached. During the growing season the fields are inspected to ascertain trueness to variety of crop, and after the harvest the seed is tested to determine whether it meets the prescribed standards of the certifying agency.

Verified-Origin seed is seed the origin of which is attested to by certain government approved seed dealers. Seed verification service deals with origin only, meaning place where grown, and gives no guaranty as to the variety, purity or viability of the seed. At the present time red clover and alfalfa are the only seeds verified as to origin. Verified seed is tagged with tags bearing the official verification emblem.

Affidavit Grimm is alfalfa seed for which the grower has made affidavit as to its being Grimm alfalfa. This affidavit seed is not regulated by either state or federal government.

Seed Corn Situation Bad

By B. W. SNOW, Chicago, Ill.

Reports from my correspondents located in each county in the principal corn states continue to emphasize the poor seed quality of the corn reserved on the farm. In some cases, early frost damaged germination, but the main injury to quality is the result of the high moisture content coupled with the long periods of sub-zero weather experienced in January and February. Corn that was not kept in specially protected storage, which represents a large part of farm reserved seed, has deteriorated during the winter and should not be used for seed this spring unless again carefully subjected to germination test.

Surveys and reports made by experiment stations in the leading corn states are now fully confirming what I have been saying about the quality of corn reserved for seed. Missouri urges careful test before using as the situation is very serious owing to poor quality of both 1934 and 1935 crops. Not 10 per cent of the samples submitted to the University will reach a 90 per cent standard and considerable shows as low as 25 per cent. Ohio tests indicate a large portion of 1935 crop is 20 per cent or more dead. Kansas tests show only 84 per cent of germination against 95 in good years. Indiana says the situation is the worst since 1918 with a large part of crib selected seed unfit for use. The fact that corn was in good shape in January is no sign that it is good now. In Iowa, tests show quality considerably below normal and unless corn was stored in a protected place before winter began, it has probably been severely injured. Nebraska shows that where not thoroly dried out, corn has been injured by the exceedingly cold weather. Illinois conditions

very bad and corn kept in unheated storage is almost as poor as corn cribbed outside.

My personal advices and the official reports quoted lead me to strongly urge every corn grower to give special attention to the character of seed he proposes to use, and to use no seed that has not been tested for germination since the winter. Poor seed means a poor crop. A short corn crop this year thru combination of poor seed and restricted acreage will be little short of a calamity. Last year, we imported 43 million bushels of corn and Argentina has matured another big corn crop and I do not want to see South America firmly establish a market for her flint corn in this country. Once consumers become accustomed to the use of a definite type of product, it takes time to educate them away from the acquired taste.—Bartlett Frazier Co.

Soil Conservation Seed

The Soil Conservation Service of the government has on hand at present about 700,000 pounds of seed, mostly of the western wheat grass, blue grama, big and little bluestem, and small quantities of other varieties. About three-quarters of this seed will be planted on erosion-control demonstration areas and the remainder will be used for plot-planting studies.

In many western states there is need for seed of well-known adapted grasses and of any other kinds that farmers can use successfully for water conservation and erosion control. Farmers in the eastern Great Plains can use long-stemmed grasses to better advantage than short-stemmed grasses. In the western half of the Great Plains the advantage is in favor of the short-stemmed grasses. The 98th meridian, running thru eastern North and South Dakota, eastern Nebraska, central Kansas, Oklahoma and Texas, is just about the dividing line in the Great Plains for the short-stemmed and long-stemmed grasses.

The Soil Conservation Service is testing the adaptability of many native grasses—as well as of approximately 400 grasses of foreign origin—to American soil, climatic, and cultural conditions. These grasses are tested for effectiveness in erosion control, suitability to different soil types, drought-resistance, and handling characteristics.

An Efficient Germinator

With the spring planting season now under way, considerable attention is being given to seed germination testing by country elevator operators. The Sho-Gro Germinator, manufactured by the Seed Trade Reporting Bureau, is one of the outstanding products on the market, giving quick and accurate results.

The Sho-Gro Germinator illustrated here-with measures 30 inches in height, 13 inches in width, and 17 inches in depth. It is constructed of non-rusting metal and glass, and consists of a stand, heating drum, and glass germinating chamber, containing five trays



The Sho-Gro Germinator.

measuring 10x15 inches. Either kerosene or electric heat may be used, the latter being recommended because of its safety and efficiency. The electric heating unit is so constructed that three different temperatures may be obtained, with 110 or 220 voltage.

The bottoms of the trays in the germinating chamber have a pebble surface which is covered with perforated zinc sheets. This acts as a reservoir to supply the proper amount of moisture to the blotters on which the seeds are placed—the seeds being sectioned off by strips of similar blotting paper. The blotter stock is specially prepared and is approved by experts for germination work.

This Germinator will test all kinds and sizes of seeds, and reduces the normal time required for germination from one to three days.

Misrepresenting Legume Inoculant

The Federal Trade Commission has issued a complaint against Kalo Inoculant Co., of Quincy, Ill., charging unfair competition in the sale of nitrogen-fixing bacteria with a humus base used to extract and transfer nitrogen from the air to leguminous plants.

Purchasing the humus containing the bacteria in bulk from a New Jersey corporation, the respondent, according to the complaint, sells its product in tin cans under the name "Humogerm," to wholesalers, retailers and jobbers of seed.

The unfair competition is alleged to consist of representations to the effect that the containers are packed with a definite, ascertainable, minimum number of nitrogen-fixing bacteria, and that each can of the product contains a specified definite minimum number of living, legume bacteria thruout the entire course of the distribution period, when, according to the complaint, these are not the facts, and such data cannot be accurately ascertained.

The complaint charges that the respondent represents the bacteria count of each can of its product as 50 per cent higher than that of any other inoculator, when this is both untrue and immaterial, and that such misrepresentation is false disparagement of competitors' products.

The commission has fixed Friday, April 17, as the final date on which the respondent may show cause why an order to cease and desist from the practices alleged should not be issued.

Corn Ear Rot in 1934 Crop

P. E. Hoppe and J. R. Holbert have recently made public in the Plant Disease Reporter their findings on the relative prevalence of various corn ear rot fungi in the 1934 crop.

The data for the 1934 crop show sharp decreases in the percentages of kernels rotted by *Diplodia* in the samples from Iowa, Illinois, Indiana, and Ohio when compared with the results obtained on the 1933 crop. The drop in *Diplodia* is mostly compensated for with an increase in *Fusarium* which showed proportionate increases in the averages for the states mentioned. The drop in *Diplodia* was less pronounced in Ohio, while in Delaware and Maryland the percentages for *Diplodia* showed slight increases over those for 1933.

The decreases in percentage of *Diplodia* rot are not interpreted as indicating less damage from *Diplodia* in 1934 but rather as increases for *Fusarium*. *Fusarium* commonly develops around wounds in ears of corn, so it would be expected that the epidemic of corn ear worm in 1934 should result in an unusual amount of *Fusarium* damage that season.

For the second successive season *Gibberella* platings ran high in Delaware and Maryland samples but again were low in samples originating from the main corn belt region. Between 20 and 25 per cent of all damaged kernels from the seaboard states plated pure cultures

of *Gibberella* in contrast with figures ranging from 0 to less than 4 per cent for samples originating in the mid-west corn belt states.

The surveys are made possible thru the active co-operation of many representatives of the Federal Grain Supervision Service, Bureau of Agricultural Economics, U. S. Department of Agriculture, located in leading markets thruout the United States.

The methods employed in the survey briefly are as follows: Samples from carload lots of known origin, in which the quantity of damaged corn was an important factor in determining the numerical market grade, are sent into the Chicago office from the important terminal markets. These samples, including both sound and damaged separates, after being reviewed in Chicago, are mailed to J. R. Holbert, Bloomington, Ill., who examines the sound separates for general quality and evidence of immaturity. The samples then are turned over to P. E. Hoppe at Madison, Wis., who plates the damaged kernels and identifies the fungi present in the damaged separates.

Grasses for the Great Plains

In regressing the Northern great plains area, the leaders are bluejoint (western wheatgrass), crested wheatgrass and brome grass. Because of their drought resistance and hardness, and because seed is available—or at least not hard to acquire—they should be first in all grass combinations to recover thousands of acres that should never have felt the plow, says the Bureau of Plant Industry of the Department of Agriculture. Other adapted grasses may be used with them if seed becomes available.

Bluejoint, an excellent soil builder, has underground rootstocks and spreads rapidly. It grows on high land, but does best where it receives some flood water. It is the best native hay grass in the northern and central plains. In good seasons, seed of this grass is plentiful. Germination also is likely to be better than for most native grasses.

Crested wheatgrass was introduced from Russia in 1898, but came on the market only 5 or 6 years ago. This grass, seeded at Mandan, N. D., in 1915, produced nearly a quarter ton of hay per acre in 1934, the driest year on record, when most grasses produced nothing. It is a bunch grass and does not have typical rootstocks, but its spreading fibrous root system makes it a good soil binder. Crested wheatgrass produces excellent hay and good seed

crops and is the best foundation for all planting in the northern plains.

Brome grass, introduced more than 50 years ago, was for many years the only cultivated grass that could be depended on in the northern plains. It is adapted to a variety of soils and can be used to advantage with crested wheatgrass, because the two types of root systems supplement each other in resisting erosion. A mixture of these grasses has been producing well at Mandan since 1918.

Semesan for Seed Corn

Root rot organisms permeating the soil and all set to eat up the seedling as soon as it starts to grow are prevented from destroying the plant by prior treatment of the seed with new improved Semesan, Jr., a dust that is used at the rate of two ounces for each bushel of seed.

At the rate of one pound for 8 bushels the cost is only 1½ cents per acre.

Seed corn, besides being exposed to rot organisms living in the soil, carries on itself root-rot fungi such as *Diplodia* and *Gibberella*, which also cause seed decay and seedling blight.

After testing, culling, grading, and cleaning, the seed and New Improved Semesan Jr. are mixed together in a treater for 2 to 3 minutes, then the seed is ready to plant.

As soon as the seed is planted, New Improved Semesan Jr. throws around it a tiny, protecting cloud of gas or vapor. This vapor is harmless to the seed and seedling, but it helps to prevent the disease germs (spores) on the seed and in the soil from attacking the germinating seed and seedling. It maintains this protecting cloud of vapor until the young plant is well started.

A convincing illustration that seed corn treatment pays is furnished by the results of years of research by the Illinois and Iowa Agricultural Experiment Stations with the organic mercuries. Their average yield increase from treatment of farmers' seed corn was 3.25 bus. an acre. If you price this increased yield at 63.29 cents a bushel, the ten-year average farm price of corn, the return is \$2.05. Deduct the cost of treatment with New Improved Semesan Jr. of 2 cents an acre—the profit is \$2.03, or a 10,150% return on the money spent for disinfectant.

New Improved Semesan Jr. is a product of the Bayer-Semesan Co.

BE PREPARED!
HESS DIRECT HEAT DRIERS
ENABLE YOU TO HANDLE
NEW GRAIN WITHOUT LOSS
DON'T DELAY
WRITE FOR FREE CATALOG.
HESS WARMING AND VENTILATING CO.
1211 SO. WESTERN AVE., CHICAGO

Grain Carriers

St. Louis, Mo.—Barge traffic on the Missouri River to Kansas City began this season Mar. 19.

Tariffs providing for free pick-up and delivery service have been filed by the New York Central, effective Apr. 1.

Morris, Ill.—The first barge-load of grain to move over the Illinois waterway was loaded Mar. 17 for the Santa Fe Elevator at Chicago.

Surplus box cars on Class I railroads numbered 123,420, Feb. 14, a decrease of 14,126 since Jan. 31, as reported by the Ass'n of American Railroads.

Intrastate Texas grain rates are too low declare the railroad companies in petitioning the Commission to raise the rates to the interstate level by a mandatory order.

Grain and grain products were loaded into 36,971 cars during the week ending Mar. 7, against 26,975 cars during the like week of 1935, as reported by the Ass'n of American Railroads.

In 26634 St. Louis Merchants Exchange v. M. K. & T. the Commission on reargument held that tho the rates on hay and straw from points in Kansas, Missouri and Oklahoma were not prejudicial, they were unreasonable.

The soybean oilmeal rate hearing date at New Orleans has been changed from Mar. 24 to Mar. 26 before Examiner Basham of the Interstate Commerce Commission, on Shipping Board Buro docket No. 370, west-bound intercoastal rates.

S 1636 empowers the Interstate Commerce Commission to prescribe thru routes not permitted now under Sec. 15 of the interstate commerce act. Sec. 15 forbade routing between 2 termini that would divert traffic from a railroad company to another when the first-named railroad could make the entire haul over its own line.

Salem, Ore.—Holding that the Oregon public utilities commissioner has no authority to award reparation to shippers, the Supreme Court has remanded to the Marion County circuit court the suit by the railroads against 56 grain shippers to invalidate the award of \$211,000 by former Commissioner Chas. M. Thomas. The court will inquire whether the facts before the Commissioner were sufficient to prove the rates unreasonable.—F. K. H.

To meet truck competition the Santa Fe has published a tariff effective Mar. 31 on alfalfa meal and feed from 11 points in Colorado to Denver, Pueblo, Trinidad and Colorado Springs, making a rate of 12 to 15 cents per 100 pounds. The lowest rate is 11 cents from McClave to Pueblo. No transit privileges other than authorized inspection, diversion, and reconsignment privileges will be granted in connection with these rates. Paid freight bills for such shipments must carry endorsement that rate applied was to meet truck competition and that freight bill is not good for transit privileges.

Upon what ground can it justifiably be contended that, when the total income of the entire population of the country is still 35 to 40 per cent less than in 1929, hourly wages in transportation, manufacturing and a few other large industries should be as high as in 1929, and 150 per cent or more higher than before the war? Working hours in these industries have been reduced; but the hourly wages in them determine their labor unit costs of production, and, therefore, the labor costs they must include in the prices and rates that purchaser of their products and services must pay.—*Railway Age*.

A 6-months extension after Apr. 1 has been granted by the Interstate Commerce Commission of the 8-cent rate on wheat Minneapolis to Chicago; 55-cent rate on corn and products from transcontinental Group F to Pacific Coast destinations, and 59 cents on barley from the Pacific Coast to transcontinental Groups D, E and E-1.

In its first spring report of lake conditions the weather bureau reports the thickest lake ice in years. Lake Erie was blocked within vision from all stations. Lake Ontario, the St. Lawrence river, St. Mary's river, Straits of Mackinac, Green bay and Georgian bay also were ice-strangled. Lake Huron was stilled, except for open water off Detour, Middle and Thunder islands.

During the year ended Oct. 31, 1935, 122 applications were filed for permission to abandon 2,537 miles of railroad lines or the operation thereof. The Commission granted 100 applications, of which 27 were contested and 73 uncontested cases, involving 336 miles of main line and 784 miles of branch line, of Class I carriers, together with 571 miles of so-called "short lines," of which 463 miles constituted the entire lines of the applicants and 108 miles were portions of such lines.

Chicago, Ill.—R. M. Field, chairman of a com'te of three to work with the Ass'n of American Railroads' com'te on simplification of tariffs, has requested members of the Midwest Shippers Advisory Board for suggestions on simplification of tariffs under which they are working. The other members of the com'te appointed by the Executive Com'te of the Board are R. I. Pierce and R. E. Riley. Their findings will be communicated to J. G. Kerr, chairman of the railroad's com'te on simplification.

Fort William, Ont.—Chartering for overseas shipments has not been as brisk for March as it was for February. Substantial quantities of grain have been shipped from Georgian Bay ports to Canadian Maritime ports and also from Alberta points to Vancouver. As liners are expected to sail from Britain for Montreal after the 9th of April, shipments out of Halifax-St. John will have to be heavy to dispose of the stocks now in store and en route. Chartering of tonnage for shipments down the lakes and for ocean space out of Montreal indicates a very busy time on the resumption of navigation. The freight rate from Montreal is reported as 1/9 per quarter to U. K. ports for tramp tonnage and 1/9 to 2/3 for berth parcel space. From St. John-Halifax current rates are 2/— for tramp tonnage and 2/— to 2/3 for berth space to U. K. ports and 10c per 100 lbs. to Antwerp or Rotterdam. From Van-

couver the current quotations are 19/— per ton to U.K. or Antwerp-Rotterdam, though considerable space was booked recently at 18/6 to London-Liverpool. A rate of \$2.25 is quoted for shipments to the Orient.—E. A. Ursell, statistician Board of Grain Commissioners.

Bearing Friction Reduced by Pyroil

The remarkable effect that addition of Pyroil to lubricants has upon power consumption and bearing wear is explained in a most interesting research made by C. A. Crowley of the Technical Service Buro.

Using a Faville Levally test machine bearings were run with and without added Pyroil. The used oils were examined, and the shafts and bearings examined microscopically.

A commercial SAE lubricant was used and run on a Faville Levally machine with V-shape bearings and 50-pound load. Fig. 1 shows a cadmium-silver bearing after having been run with plain SAE 20. Note the corrosion due to chemical attack. The amount of sludge resulting was 0.27 per cent by weight. Fig. 2 shows a cadmium-silver bearing after running with the same SAE 20, but with added Pyroil. Note the smooth surface, indicating freedom from chemical attack. The amount of sludge resulting was 0.16 per cent, a reduction of 40 per cent.

Similar results were obtained with a copper-lead bearing using a load of 10 pounds.

It is evident that the reduction in torque, temperature, and wear noted on the Faville Levally test machine by the use of Pyroil additions to high grade lubricants is connected with preservation of the bearing surfaces, reduced sludge in the oil, and increased oiliness and film strength.

Pyroil does not depend on chemical attack as a method of improving wetting properties or oiliness.

That excessive chemical corrosion and mechanical erosion of bearings go hand in hand even under light loads is clearly shown by photomicrographic examination of the bearings and sludge.

The self-welding or seizing of corroded bearing metal onto the steel shaft cannot help but increase the co-efficient of friction.

Load-torque tests running steel on steel and cadmium-silver on steel are evidence of improved oiliness and film strength of Pyroilized oils.

That effectiveness of Pyroil increases with the severity of bearing conditions is shown by the greater percentage of reduction in sludge formed during "running-in" tests as compared to lightly loaded "previously run-in" tests.

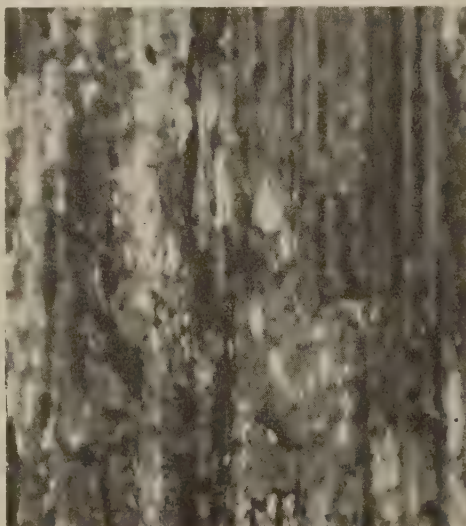


Fig. 1. Commercially Lubricated Bearing Chemically Attacked.

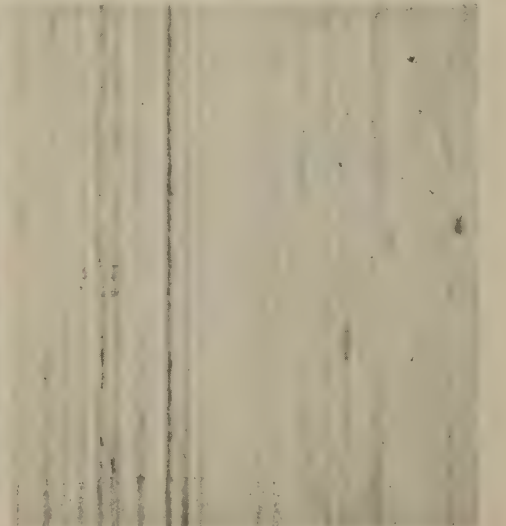


Fig. 2. Bearing of Similar Metal Lubricated with Added Pyroil.

Feedstuffs

San Francisco, Cal.—February receipts of bran were 100 tons, of beans 22,500 sacks and of hay 360 tons, compared with bran 145 tons, beans 12,800 sacks and hay 372 tons in February, 1935.

Prices received by farmers for meat animals, work animals, chickens and eggs, and livestock products during the calendar year 1935 averaged 39 per cent higher than in 1934, 61 per cent higher than in 1933 and 60 per cent higher than in 1932.

Manhattan, Kan.—Three sections of the American Ass'n of Cereal Chemists will meet here Apr. 4 at the Kansas State College. Among the eight topics of the program is "Breeding Quality Wheats" by Dr. J. H. Parker, department of agronomy, Kansas State College.

Washington, D. C.—Alfalfa meal production during February totaled about 16,740 tons compared with output during January of 15,480 tons. Production during the month was almost double that of February last year, and a third larger than for the month two years ago. Production June through February totaled about 170,920 tons compared with 150,070 for the comparable period last year, and 167,820 two years ago. The output of distillers dried grains during February was 13,073 tons, against 13,935 in January, as reported by the Bureau of Agricultural Economics.

Seattle, Wash.—A sharp advance of \$2 per ton in hay during the last two weeks is reported by leading dealers. No. 1 alfalfa now is selling around \$13 per ton at Yakima. The increase in hay is the result of the sharp weather experienced in Washington and Oregon. The crop is excellent but the winter weather and heavy snows compelled feeding of hay. Ordinarily hay comes to Seattle from the Ellensburg-Yakima section, but now it is going in equal amount to Eastern Washington, Eastern Oregon and Portland. The movement by truck to these areas is remarkably heavy.—F. K. H.

Portland, Ore.—Feeding of brood sows from the time of breeding to farrowing is important to the hog raiser if he would obtain large litters of strong healthy pigs, according to Con S. Maddox, extension animal husbandry, State College of Washington. The unborn pig demands muscle and bone building feeds and vitamins. A little money expended to put the necessary protein in the sow's ration will bring big returns. It is not necessary to feed as much protein in the ration of the bred sow as is needed for the sow at breeding time. However more protein is necessary for the six weeks preceding farrowing. In alfalfa-producing regions sows are satisfactorily wintered on a mixture of three pounds of chopped alfalfa hay or alfalfa meal to one pound of grain, self-fed. Good quality leafy green alfalfa hay in some form is recommended as a supplement to any mixture.—F. K. H.

Portland, Ore.—The first condensing plant of its kind to be erected in the Pacific Northwest is announced by Norris B. Stone of the Golden Eagle Milling Co. The concern will be known as Western Condensing Co. and will shortly place a \$25,000 plant in operation. Large tank trucks will be used to collect the whey in the area within 50 miles of Portland. The new plant will contain the most modern condensing machinery designed by the company's president, Mr. D. D. Peebles.—F. K. H.

Portland, Ore.—Carnation Company 1935 earnings, after deducting all charges and allowance for preferred dividends, amounting to \$1,010,438, equivalent to \$1.65 a share on the common stock outstanding. Current assets were cited as equivalent to \$3.41 for each dollar of current liabilities. Net sales for 1935 amounted to \$44,939,354, an increase of 20.1 per cent over 1934.—F. K. H.

St. Louis, Mo.—February receipts of kafir were 16,800 bus., compared with 17,100 bus. in February, 1935. February shipments were 1,400 bus., compared with 3,000 bus. in February, 1935. Receipts of hay during February were 324 tons, compared with 1,980 tons in February, 1935. Shipments during February were 132 tons, compared with 264 tons in February, 1935.—C. B. Rader, sec'y Merchants Exchange.

Portable Mills Licensed in Pennsylvania

R. M. Field, executive vice pres. of the American Feed Mfrs. Ass'n, is pleased to advise members in a recent bulletin that effective Jan. 1, 1936, there was enacted Bill No. 375 by the Pennsylvania Legislature "Requiring the licensing of portable grinding mills by the respective counties; fixing fees therefore; and prescribing penalties."

The bill provides a license fee of \$25 for each portable grinding mill, which shall be paid into the County Treasury for the use of the County, and does not apply to portable grinding mills used by farmers for their own use or to such mills owned by an organization of farmers and used only for the benefit of the members of such organization.

Feed Prices

The following table shows the closing bid price each week for April futures of standard bran and gray shorts, spot cottonseed meal, soybean oil meal and alfalfa meal in dollars per ton, and No. 2 yellow corn and No. 2 yellow soybeans, in cents per bushel.

Minneapolis Spot				Kansas City			
		Bran	Midls	Bran	Shorts		
Jan. 11	....	16.25	16.50	15.25	19.40		
Jan. 18	....	15.50	15.75	15.50	19.60		
Jan. 25	....	15.25	15.25	15.25	19.50		
Feb. 1	....	15.00	15.50	15.00	18.80		
Feb. 8	....	15.50	16.00	15.45	19.50		
Feb. 15	....	15.50	16.00	16.00	20.00		
Feb. 21	....	16.50	16.50	16.90	20.50		
Feb. 29	....	16.00	16.50	15.25	19.25		
Mar. 7	....	16.00	16.25	15.10	18.25		
Mar. 14	....	16.00	16.00	16.00	19.50		
Mar. 21	....	16.00	16.25	15.70	18.90		
St. Louis				Chicago, Soy			
		Bran	Shorts	Beans	Meal		
Jan. 11	....	17.00	20.30	87	25.90		
Jan. 18	....	17.50	20.60	85	25.40		
Jan. 25	....	17.20	20.25	85	24.90		
Feb. 1	....	16.65	19.65	84	24.40		
Feb. 8	....	17.00	20.00	84	23.90		
Feb. 15	....	17.30	20.50	84	24.00		
Feb. 21	....	17.40	20.85	85	23.40		
Feb. 29	....	17.25	20.30	85	23.40		
Mar. 7	....	16.90	19.15	84	23.40		
Mar. 14	....	17.30	19.75	82½	22.40		
Mar. 21	....	17.00	19.75	80½	21.90		
Cottonseed Meal				Denver			
		Ft. Worth	Memphis	Alfalfa	Chicago		
Jan. 11	....	25.00	21.50	21.00	Corn		
Jan. 18	....	24.50	21.50	21.00		61	
Jan. 25	....	23.50	21.00	21.00		61	
Feb. 1	....	23.50	20.50	21.00		61	
Feb. 8	....	23.50	20.50	21.00		61	
Feb. 15	....	23.50	20.50	21.00		62	
Feb. 21	....	24.00	21.50	21.00		62	
Feb. 29	....	24.00	20.50	21.00		63	
Mar. 7	....	24.00	20.50	21.00		62½	
Mar. 14	....	24.50	20.00	21.00		62½	
Mar. 21	....	24.50	20.00	21.00		60	

Modernized His Plant Through F.H.A. Assistance

The feed business looked very promising twelve years ago when Roy S. Schaper, grocer, of Pana, Ill., stocked a small supply to please a few of his farmer customers who wanted a sack or two of chicken and cow feed. In fact, he thought he would like handling feeds much more than selling groceries and he proceeded to push these products.

Demand improved and before he realized it feeds and other farm supplies which seemed natural to take on, crowded his store so badly he had to build a small warehouse. This helped, but only for a while because the feed trade grew rapidly.

Five years ago Mr. Schaper realized he had outgrown his store and warehouse. Altho he hadn't reached the limit, customers demanded more service such as the handling of baby chicks to say nothing of fencing and other equipment. He knew it wouldn't be long before he would be forced to move or to build additional warehouse and salesroom space. Carrying bigger stocks involved more working capital. Drought and the increasing demand for commercial feed made it absolutely necessary that he obtain larger quarters.

Schaper worried along as best he could, visualizing the kind of a building he would erect if he had the necessary money.

Then came the Federal Housing Administration's modernization campaign to help feed dealers and other business men having such problems. The amended National Housing Act permitted retailers such as feed dealers, to borrow up to \$50,000 in modernization credit funds for repairing, enlarging and modernizing their plants and for the purchase and installation of needed machinery and equipment.

Taking advantage of the Modernization Credit Plan, Mr. Schaper was able to erect an addition to his warehouse which also houses his salesroom. The one-story brick structure is 80 x 80 feet and modern in every respect.

While the Federal Housing Administration makes modernization credit funds available to business men and manufacturers, it does not lend money. It insures commercial banks, trust companies, building and loan associations and other private financial institutions against loss up to 20 per cent of the total modernization credit extended. Banks and other lending agencies are authorized to complete transactions without referring them to the Administration. Interest and other charges may be as low as the borrower and lending agency agree to, but in no case can the total charges exceed the equivalent of a \$5 discount per \$100 face value of a one-year note. Loans may run as long as five years but must be paid in monthly installments.

Feed dealers and manufacturers desiring to obtain government-insured funds for plant or building repairs, alterations or enlargements or for the purchase and installment of necessary equipment and machinery should make application to their banks or other accredited lending agencies. In addition to the usual credit statement the purpose for which the modernization credit will be used must also be stated because of certain restrictions on what building improvements and machinery can be financed under the regulations of the National Housing Act.

Information of specific equipment may be had by writing to Washington, D. C., or by consulting any of the Federal Housing Administration's branch offices.

Whose Ration?

FARMER: I been reading a good deal in your Journal about a balanced ration.

NEW FEED MERCHANT: That is interesting.

F.: What is your idea of a balanced ration?

N. F. M.: Fresh peas on a knife.

The Dry Milk Shortage

Three factors have contributed to the present shortage of dry skim milk: A lowered total milk production which is due to a lowered dairy cow population because of the 1934 drouth; and lowered breeding ability also brought about as an after effect of the drouth. Increased cheese prices making it possible for cheese factories to offer more money for whole milk than butter makers could afford to pay. Increased casein prices, making skim milk worth more when converted into casein than when dried.

The present shortage is temporary and dry skim milk production is definitely on the up grade now.

Approximately 300,000,000 lbs. of dry skim milk, 55,000,000 lbs. of dried buttermilk and an unreported amount of dried whey are made annually. Of this production most of the dried buttermilk and dried whey is used in feed and also 125,000,000 lbs. of the dry skim milk, the rest being used in the preparation of human food.—C. W. Sievert.

Growing Pigs Need Other Feed with Hulled Oats

In the case of growing-fattening pigs hulled oats should be accompanied by other feed. This has been determined by W. E. Carroll and W. P. Garrigus in experimental work carried on thru several years, at the Illinois Exp. Sta.

In a test conducted a year ago severe stiffness developed in a large proportion of the pigs receiving the ration based on hulled oats. To determine whether this could be avoided by a more liberal use of alfalfa meal with the oats, the test was repeated during the winter of 1933-34, 5 per cent of alfalfa meal being included in all the rations.

On the particular point at issue the result was very clear, as the pigs receiving chiefly hulled oats and alfalfa meal with mineral free-choice were affected by stiffness even more than those in the previous test. No such trouble appeared in the other lots.

Hulled oats proved valuable during the early part of the test and, where fed as only part of the ration, increased the feed consumption and gain.

The value of hulled oats in terms of other feed saved by their use, was somewhat lower than the value suggested by the earlier test, results of which were given in the 46th annual report.

Alabama Modifies Notification Regulations

Sec. 130 of Article Sixteen of the Agricultural Code of Alabama, 1927, reads as follows:

"Commissioner Notified of Shipments. It shall be the duty of persons shipping commercial feeds to notify the Commissioner in writing by mail or otherwise on the day of shipment, or within twenty-four hours thereafter, of every shipment exceeding five tons. Such notice shall state the brand, number of sacks, the weight of each sack or package or bundle, and to whom shipped and addressed."

R. M. Fields, executive vice pres. of the American Feed Mfrs. Ass'n, reports that:

Letter has been received from Dr. George H. Marsh, Chief of the Division of Foods, Feeds and Fertilizers, advising that to meet the requirements of this section of the law, it will be satisfactory if firms shipping into the state of Alabama will send a copy of the invoice covering the shipment with prices deleted, and as the invoices contain all the information required by the law, the receipt of such invoices without the price shown thereon will be accepted as a notification of shipments in lieu of the printed notification form which the Department has heretofore

required to be filled out. This regulation will make the requirement of notification much less burdensome.

Gain by Grinding Corn

Four lots of 10 yearling steers each, averaging 671 lb. per head, were fed for 180 days on a basal ration of alfalfa hay at the Nebraska Exp. Station. In addition the respective lots received shelled corn, cracked shelled corn, ground ear corn, and ground snapped corn for 80 days, ground ear corn for 60 days, and cracked shelled corn for 40 days. The average daily gains in the respective lots were 2.2, 2.3, 2.5, and 2.4 lb. per head.

While the steers fed cracked corn consumed 2 per cent more corn and 2 per cent less hay and made 3.5 per cent faster gains than those fed whole corn, the differences in efficiency were overcome by the grinding costs. All of the cattle made very efficient use of their feed. The cob and the cob and husk were all about equal in reducing the high requirements per 100 lb. of gain. Steers fed the bulky rations went on full feed more rapidly than those on the more concentrated rations. About twice as much pork was produced in lot 1 as in any other lot. The market value of the cattle was highest in lot 4, while the carcasses in lot 1 were slightly inferior to those in the other lots.

Artificially Dried Grass as Complete Dairy Ration

That a complete ration for dairy cows in winter can be made from pasture grass by artificial drying is held possible by R. E. Hodgson, well-known dairy husbandman at the Western Washington agricultural experiment station, on the basis of experimental work conducted cooperatively by his station, the agricultural experiment station at Pullman and the Bureau of Animal Industry of the Department of Agriculture.

Feeding trials in which dried grass was substituted for part or all of the grain mixture fed to milking cows have shown, Hodgson feels, that a home-grown feed palatable and high in protein content can be produced by frequent cutting and artificial drying.

Another result which the experiments brought out is that artificial drying within certain temperature limits does not affect the nutritive value of grass either in organic or inorganic elements. The most suitable temperatures seemed to be above 250 and below 400 degrees. As a result, Hodgson believes artificially dried pasture grass can be used efficiently with other roughage feeds as a substitute for protein-rich concentrates in the dairy cows in concentrates in the rations of dairy cows in milk.

Two advantages of the artificial over the natural method of making hay is that it reduces loss thru leaching and loss of leaves and can be done regardless of weather conditions. The forage must be preserved in an immature condition in order to obtain a high protein and nutrient content and it has also been found that growing grass contains more calcium and phosphorus.

In digestion trials with heifers, the dried hay compared favorably with many high-protein concentrate feeds. Addition of the dried hay to alfalfa in a trial with milking

cows caused greater consumption of feed and an increase in milk production over a straight alfalfa diet.

Cost of the drying equipment is the major cause of its not being used more generally, Hodgson states.

Caught by an Old Trick

A member of the Indiana Ass'n was caught by a slicker recently who bot some feed and in payment gave a check signed by J. H. Tate & Co., Monticello, Ky., for more than the amount of the purchase. Buyer got some cash in change, but never called for his feed and the check proved to be worthless. Look out!

GRUENDLER

1885 TO 1936



Slow Speed and High Speed Feed Grinders still maintain lowest cost and highest quality feed and are making profits instead of just swapping dollars. Ask the feed miller who owns one.

Are you interested in establishing a complete feed mixing plant? Write for Bulletin "Your Own Feed Plant."

GRUENDLER CRUSHER & PULVERIZER CO.
2915 No. Market St. St. Louis, Mo.

Practical Poultry Farming

By L. M. Hurd

This revised and enlarged edition is right up-to-date and contains all important discoveries in poultry raising made in recent years.

The book contains the latest information on feeding, a complete discussion of the new vitamin G, practical information on the two-story poultry house and heating, disinfecting incubators, battery brooding and raising chicks on screened platforms, and the latest discoveries in treating pests and diseases, including Leukemia, and the newest information on disinfecting houses. This edition also describes the new methods of feeding turkeys.

Printed on enamel book paper from large type and well bound in cloth. 480 pages, 33 chapters, and 200 engravings. Weight 2 lbs. Price \$2.50 plus postage.

Grain & Feed Journals

Consolidated

332 S. La Salle St. Chicago, Ill.



Corn Gluten Feed, Corn Oil Cake Meal,

Brewers' Dried Grains Malt Sprouts

ANHEUSER-BUSCH ST. LOUIS

Keeping Up with Soybeans

By E. F. JOHNSON, St. Louis

No one anticipated the rapid increase in the production of soybeans that has taken place in the last few years. Prior to 1934 the greatest production of soybean meal was 125,000 tons in a year. In 1935 this jumped to 250,000 tons, and the anticipated production for 1936 calls for 650,000 tons.

The soybean processing industry has expanded rapidly to take care of the great increases in production that have spread from a few minor points a few years ago to encompass most of the middle west. Today 41 companies are operating many units in the processing, some of the units new, others plants that have been adapted from other purposes. Fifteen of them are cottonseed meal mills in the south that turned to soybeans when production of cottonseed was curtailed.

Soybean meal and soybean oil find a market as substitutes for other vegetable meals and oils. It has been a problem for the processors to move the 22,000,000 bus. of beans that they have taken from last year's 39,000,000 bu. crop. It is doubtful if the soybean market would have held up nearly so well as it has, were it not for development of an export market that has absorbed 1,600,000 bus. of beans in addition to vast quantities of meal. Soybean meal is one of the domestic commodities that must find an export outlet.

Few of the large processors ever figured on the cottonseed mills of the south as competitors. Unfortunately the cottonseed mills are not suitably equipped to control production, and the variable qualities of their meal and oil have been a big factor in the distress offerings that have carried meal and oil prices to unwarranted low prices. More than one-half of one per cent of free fatty acid makes soybean oil unsuited for edible purposes, throwing it into lower market grades. Oil from damaged beans, dark in color, can be used, but its outlet must be to the soap manufacturers.

There is no deep secret about soybean prices. The price of meal, plus the price of oil, less the cost of handling and processing, makes the price that can be paid the farmers for soybeans. Today soybean meal is priced at about \$18 a ton for the processors; oil, 6c a pound. This doesn't allow a big price for beans. Oil is back on a linseed oil basis, but little of it is moving into paint plants. The paint, linoleum, rubber goods, and other industries, will use soybean oil, but it must be on a price basis competitive with other vegetable oils suitable to the manufacturing purposes.

Soybeans are attracting the attention of the best chemists. About 3,000,000 lbs. of meal annually has been going to sausage manufacturers, large quantities have been blended with wheat flours, especially in such products as pancake flours, flakes have been going to breweries to build a head on beer, so well loved by bartenders, feed manufacturers have found the meal unexcelled as a vegetable protein. Properly balanced with minerals, soybean meal has been found the equal of tankage as a protein feed for hogs. Yet the large quantities of meal that have come on the market have forced its price to \$2 a ton under cottonseed meal, when it should be priced \$2 higher. If increased production keeps on next year will be a critical year in domestic soybean history.

Soybeans vary in their protein content as much as 20 per cent. Innoculation of the seed improves the protein volume, and reduces the blending found necessary by processors to maintain protein constancy in the meal.

Grain Mixtures for Cows

After completing another set of feeding trials Professor Savage of Cornell reports that with mixed hay and corn silage, 16 per cent protein in the grain mixture seems to be an entirely sufficient amount of protein for milk production. Keeping in mind that roughage is probably losing a little in quality as the season advances and an increasing amount of concentrate will need to be purchased, the following mixtures are indicated on the basis of current prices.

With mixed hay and silage: 700 hominy or corn, 500 barley, 300 st. middlings, 100 corn distillers' dried grains, 200 gluten feed, 200 soybean oil meal. This is 16.9 per cent protein.

With poor quality hay, with or without silage: 600 hominy or corn, 400 barley, 200 st. middlings, 300 corn distillers' dried grains, 400 gluten feed, 200 soybean oil meal. This is 20.5 per cent protein.

Feeding Value of Ground versus Unground Oats

An average of three separate experiments at the Texas Agricultural Station comparing ground versus whole oats showed the ground oats to have a value of 56.5 therms per hundred pounds compared with 52.5 therms for whole oats. The cows, while on ground oats, produced an average for the three experiments of 78.9 pounds more milk per cow in twenty-one days than when on whole oats. On the basis of therm values for ground and whole oats for an average of the three experiments it was found that 100 pounds of ground oats were equal to 107.6 pounds of whole oats in the ration of dairy cows when oats comprised 52 per cent of the grain mixture.

An average of three separate experiments comparing whole versus ground milo grain showed the ground milo to have a value of 79.7 therms per hundred pounds compared to a value of 76.2 therms for whole milo. The cows produced 145.3 pounds more milk per cow in twenty-one days while on the ground milo than while on whole milo. On the basis of therm values, based on the results of these three experiments, 100 pounds of ground milo is equal to 104.6 pounds of whole milo in the ration of dairy cows when the milo comprises 58 per cent of the grain mixture.

At the present time experiments are being conducted to ascertain the comparative values of whole versus ground barley.

Tankage v. Cottonseed Meal

Results of the first of a series of trial comparisons of high grade tankage and cottonseed meal at North Dakota Agricultural College indicate that tankage may be used to advantage as a feed for dairy cows when the price is favorable. Definite conclusions are withheld pending completion of the trials.

For test purposes, two-thirds of a pound of tankage and a pound of cottonseed meal were regarded as equal in nutrient value, and the feeds were given as a supplement to farm grown grains. Four light cows were started on each feed mixture, and at the end of thirty days changed to the other mixture. Amount of feed was made proportional to milk production, and milk and butterfat production was approximately the same on both feed mixtures. The cows consuming tankage took from a half pound to 2½ pounds a day. Milk was scored for quality at intervals, and at no time did samples from cows on tankage show any off flavors.

KELLY DUPLEX MILL MACHINERY



New 1936 Model
Feed Mixer

With Latest Improve-
ments at a New Low
Price.

Write for details.

Everything
for Mill and Elevator

The Duplex Mill & Mfg. Co.
Springfield, Ohio

Look for this triangle
when buying Linseed
Meal



The triangle label as-
sures uniformly high
quality and is the
mark of helpful service

... Is Doing
... A Real Job for You

THE Linseed Meal Educational Committee is carrying on an extensive advertising campaign to dairymen, stockmen, feeders and farmers . . . telling them to feed a balanced ration containing Linseed Meal.

Thousands of copies of the new Linseed Meal feeding book "Practical Feeding for Profit" and the Master Feeding Chart are being sent to feeders and farmers everywhere.

Linseed Meal, the old reliable protein supplement, is a business builder for you . . . If you have not already done so, write today for your copies of the booklet and chart.

LINSEED MEAL EDUCATIONAL COMMITTEE

744 N. Fourth St.,

Dept. FD-4, Milwaukee, Wis.

The Canadian Wheat Board is estimated by Broomhall to have reduced its holdings to 150,000,000 bus.

Poultry Feeds and Feeding

Chicago, Ill.—The Mercantile Exchange of the egg and butter trade has adopted eastern standard time, trading from 9 to 11 a. m.

One group of Leghorns made the remarkable efficiency record of one dozen eggs for each 3.75 pounds of feed consumed in a test at the Maryland Exp. Station.

Ithaca, N. Y.—At the end of the 23d week of the western New York egg-laying test at Stafford, the highest point score is held by white Leghorns from the Dryden poultry farm, Modesto, California. This pen has laid 1,372 eggs and has 1,410.95 points. A pen of Rhode Island reds from Concord, Mass., is in second place with 1,474 eggs and 1,397.75 points.

White Leghorn pullets require about four units of vitamin A potency in the feed over and above maintenance requirements for the production of one unit in the eggs. Additional work on this point has been done during the past year. It was found that the hens apparently stored up little vitamin A during the molting period, that the requirements for molting are as heavy as the requirements for laying. It appears from the work which has been done that many lots of poultry do not receive sufficient amounts of vitamin A for the good health of the laying hens.—Texas Exp. Station.

Vitamin G Not Damaged in Drying Milk

An investigation was undertaken by H. J. Davis and L. C. Norris of Cornell University into the possibility that vitamin G, sometimes destructible by heat, may be injuriously affected in the conversion of skim milk into dry powder.

A number of pens containing 25 chicks each were used in the test. The chicks were first fed a vitamin G deficient ration for two weeks after hatching so as to deplete their body reserve of vitamin G.

The samples of dried skim milk were prepared from the same tank of skim milk as the liquid milk samples to be sure that both samples possess the same original vitamin G potency.

The statistical analysis of the results of this experiment, with the possible exception of pen 6 which received dried skim milk previously soured and then made alkaline (0.15 per cent titratable alkalinity), showed that all samples possessed approximately the same vitamin G potency. When this experiment was repeated, pen 6 which received the same milk as in the previous experiment again gave poorer results than any of the other samples. Upon combining the results of these two experiments, this difference was not found to be statistically significant. However, it does appear to be of some biological significance. These findings are not entirely in agreement with the work previously mentioned by Halliday. This discrepancy is probably due to the difference in the vitamin G carrier used. Halliday worked with protein-free milk, and in removing the proteins from the milk the stability of vitamin G was probably affected so as to make it more readily destroyed by heat and alkali.

The results of this investigation show that there was no significant destruction of the growth-promoting component of the vitamin G complex contained in skim milk when dried by the Merrell-Soule spray process, the Gray-Jensen spray process or the open-roller process.

Also no measurable destruction of vitamin G occurred as a result of holding liquid skim milk in storage tanks at 170° F. for 18 to 24 hours previous to drying, or of slightly scorching the milk powder during the drying process, or of neutralizing sour skim milk previous to

drying. However, when sufficient alkali was added to bring the pH to approximately 9.5 or the titratable alkalinity to 0.15 per cent a slight destruction of vitamin G appeared to take place.

Indifferent Results from Iodine Feeding

Reporting in the Journal of Nutrition on the effect of supplementary iodine on the nutritive value of chick rations, A. D. Holmes told of feeding results with 5 pens of 30 Rhode Island Red chicks each fed a chick growing mash from hatching to 12 weeks of age under standardized laboratory conditions. The diet of 4 pens was supplemented with 18.8, 37.5, 75, and 93.8 mg of KI (potassium iodide) per kilogram of mash. Observations were made on growth, physical appearance, and feed consumption, on the nutritive efficiency of the diets, on the bone growth, and on hemoglobin content of the blood at 12 weeks of age.

The final weight of the chicks did not vary consistently with the amount of iodine fed. The mash consumption was greatest for the pen receiving the most KI, but in physical appearance the pens were similar. The mash containing 37.5 mg of KI had the highest nutritive efficiency. The length and diameter of tibias were greatest in the lot receiving the most KI, but the heaviest tibias were from the pen receiving 18.8 mg and the ash content was largest for the chicks in the pen receiving 37.5 mg of KI. The internal structure of the tibias showed the same development in all pens. The hemoglobin content was greatest in the control pen.

Condensed Whey for Coccidiosis

M. M. Bowen, Bowen Poultry Farm, Lafayette, Ind., walked into his broiler feeding house one morning early in March and observed a few droopy birds. The following morning many more birds were sick. In the two weeks that followed Mr. Bowen lost between 400 and 500 of the 3500 eight-week old broilers that he had on feed.

Then someone suggested trying condensed whey as a milk feed cure for what had turned out to be a serious infection with coccidiosis. Mr. Bowen bought a barrel of Wayco, and placed it before the birds, first removing all feed and water, so that the hungry birds would have access only to the condensed whey. Only 14 of the sickest birds died in the following 12 hours. Then the deaths stopped.

Three days later all of the remaining birds were back on their feet, healthy and full of pep. Mr. Bowen placed them back on his regular broiler mash and started to feed them out for the market. But he took the precaution to feed condensed whey along with the mash as a coccidiosis preventive.

H. W. Fitting, proprietor of the Fitting Hatchery, Lafayette, discovering coccidiosis in a part of his flock a week or two thereafter was quick to take advantage of the Bowen experience, and was relieved to obtain the same results. Three days of the condensed whey diet put all of the birds back into healthy condition.

Presumably it is the high lactic acid content of condensed whey that so quickly cleaned up the cases of coccidiosis. The condensed whey used contained between 6 and 7 per cent lactic acid.

A Mean Peck

HE: "I've decided to go into the poultry feed business."

SHE: "Going to earn your living by fowl means, eh?"

Whole Pressed Cottonseed

Whole-pressed cottonseed (commonly called "cold press cake") is an excellent feed for use on the range and in the feed lot in rations for beef cattle, dairy cattle, sheep, and work stock. It is a product secured in the expeller process for the extraction of oil and consists of cottonseed meats and hulls less the oil extracted and the lint removed. Average analysis shows that this product contains 25 to 30% protein, 50 to 54% carbohydrates and 5.5 % to 7.5% fat and 70.9 pounds total digestible nutrients for 100 pounds. It is offered to the trade in two forms: whole-pressed cottonseed in flake form; and whole-pressed cottonseed ground. When fed as the sole concentrate, the flake form will be found economical and satisfactory. If used in mixed ground grain rations, the ground form is more suitable. Whole-pressed cottonseed is particularly suitable for use in rations in which added roughage or bulk is desired or when it is desirable to feed only a limited amount of grain.

SYNTHA-MILK MIXER

A Vitamin (A-B-C-D-E-G) Product to supply the values of milks, Iodine, Iron and Yeast—ready for mixing in your formula. Takes the trouble and grief out of mixing. Ask for "The Living Proof."

SYNTHA-MILK COMPANY

868-9 Reibold Bldg.,
DAYTON, OHIO

4549 Produce Plaza,
LOS ANGELES, CALIF.

Triple XXX Alfalfa Meal

Use more of it—it's healthful



THE DENVER ALFALFA MILLING & PRODUCTS CO.

Merchants Exchange
ST. LOUIS

LAMAR, COLO.

Poultry Feeds and Feeding

By Harry M. Lamon & Alfred R. Lee

A book of 247 pages (14 chapters, 23 illustrations), designed to meet the needs of all interested in feeds for poultry. Grains, rations and methods used in every section of the U. S. are discussed.

Part I is devoted to the principles of feeding, explains which elements have been found essential in feeding poultry and tells why certain combinations are made. Every grain or feed-stuff used for poultry is discussed in Part II. Rations for every class of poultry keepers are included in Part III.

An invaluable book which should be in the reference library of every grinder and mixer of feeds for poultry. Shipping weight 1½ lbs. Price \$1.75 plus postage.

Grain & Feed Journals

Consolidated

332 S. La Salle St.

Chicago, Ill.

What Materials Increase Hatchability

By C. W. SIEVERT

R. M. Bethke and D. C. Kennard of the Ohio Exp. Station at Wooster have worked out several important points since their work was started in 1923. They find that a mash feed made from ground grain, bran, middlings, and meat scrap is not a good producer of hatching eggs. Direct sunshine, irradiation with ultra violet light, or the feeding of vitamin D potent oil does not have much effect on the hatchability with such a mash.

Some factor or factors supplied by green feed, alfalfa, or other legume meals, milk, or yeast, are shown to increase hatchability. The addition of cod liver oil to these materials in the mash has a further beneficial effect.

A good ration for hatchability will usually produce a large number of eggs. It is not necessary for a good producing hen to lay eggs of low hatchability because she has used up the supply of vitamins and minerals stored up in her body during the summer season. The proper feed, which is one containing dry skim milk, alfalfa, and cod liver oil, will enable the hen to continue laying good quantities of eggs possessing high hatchability.

The Kentucky Agricultural Experiment Station has shown that the proper amount of calcium is also a factor to consider in producing hatching eggs. This may be provided by giving the hens access to clean oyster shells, limestone grit, or a similar form of calcium.

Professor Halpin at the Wisconsin Station has shown that milk and fresh or dried green stuff have a very favorable effect on raising the hatchability of hen's eggs.

Professor W. R. Graham and his associates at the Ontario Agricultural College in Guelph, Ontario, have done many years' work on egg production and hatchability. They report that dried milk with meat meal

or fish meal, together with cod liver oil, appears to be the most satisfactory combination of supplements where hatchability, egg production and amount of feed to produce a dozen eggs are considered.

Other experiment stations recommend increasing the amount of milk in the ration for producing hatching eggs. Many such feeds call for at least 10% dry skim milk, and are known as "breeding mash."

There are several factors in feed which are essential to the hatchability of eggs produced.

1. Use a mash containing not less than 5% dry skim milk and 5% of alfalfa.
2. Use a potent cod liver oil, or other "vitamin D" oil.
3. Keep oyster shell or high calcium limestone grit before the birds.

Suggested Formulas.—We are presenting some formulas recommended by various state experiment stations. These formulas are up-to-date and thoroly reliable.

(These formulas are arranged alphabetically by states, quantities stated in pounds.)

California—1935		Cornell—1935	
69½	ground grains and grain products	400	yellow cornmeal
12	fish meal (65% crude protein)	400	wheat bran
5	dry skim milk*	400	flour wheat middlings
8	alfalfa leaf meal	400	ground heavy oats or ground barley
2	bone meal	200	meat scrap (55% protein)
2	ground limestone or ground oyster shell	200	dry skim milk*
1	salt	40	limestone or oyster shell flour
½	sardine or cod liver oil	10	salt
		20	cod liver oil (when confined)
100		2,070	
Kentucky—1935		Michigan—1935	
500	ground yellow corn	20	ground corn
500	bran	20	bran
500	middlings or shorts	12	flour middlings
300	meat scrap or tankage	18	ground oats
100	dry skim milk*	10	meat scrap
100	alfalfa leaf meal	10	dry skim milk*
20	salt	5	alfalfa meal
		2	steamed bone meal
		2	cod liver oil
		1	salt
2,020		100	

*NOTE.—Several different terms are used in the various states to designate dairy products recommended in their formulas. Such designations include dry skim milk as one of the recommended materials. We are showing the proper use of dry skim milk in these formulas. Dry skim milk is the most extensively used dairy product in poultry mashes.

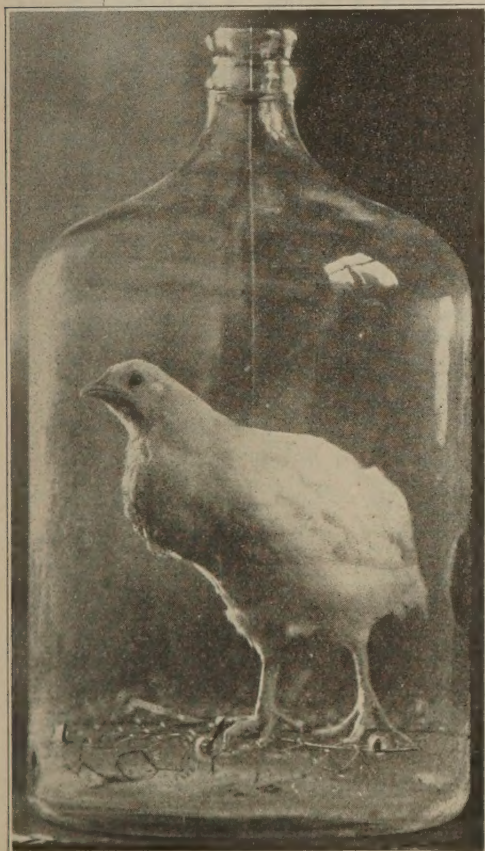
By cracking down on well established stock raisers in the regions best adapted to that form of agriculture the animal industry of the country is being driven into new hands and into less suitable areas to the discomfort and financial disadvantage of the corn belt farmers and western ranchers. The AAA has tried to move all the national furniture around except the hornet's nest.—Dr. E. V. Wilcox, sec'y Farmers Independence Council of America.

Chicken Thrives in Glass Bottle

Perfectly safe from molestation in a 5-gallon glass bottle that has been her home since birth, a White Leghorn pullet surveys the outside world with equanimity.

V. J. Allgaier, feed dealer of Shenandoah, Ia., has the pullet on display in a window. The bird apparently is satisfied in her glass walled home, blissfully ignorant of the pleasures of free range.

The bird has thrived on the following ration: dried buttermilk, cod liver oil, sardine oil, meat scrap, fish meal, carotene, soybean oil meal, alfalfa leaf meal, wheat germ, linseed meal, corn germ meal, oat middlings, corn meal, wheat bran, grey wheat middlings, 1½ per cent limestone, ½ per cent iodized salt, all combined in a commercial mixed feed analyzing 18 per cent crude protein, 46 per cent nitrogen free extract, 4 per cent crude fat and not over 7 per cent crude fiber, which is sold as a chick starter.



Leghorn Pullet in Her Glass Bottle Home.

Vitamin D. Requirements of Birds

Experiments by a major producer of fortified cod liver oil have shown that chickens require a minimum of 18 units (USP) of vitamin D per 100 grams of feed until they are 12 weeks old, at which time their weights should average 1,000 grams or better.

Turkeys require 60-70 units of vitamin D per 100 grams of feed, and at 12 weeks should average 1,900 grams or better in weight.

Pheasants require 50-60 units per 100 grams of feed, and at 12 weeks should average 600 grams in weight or better.

The Fourth International Conference for Anti-Locust research will be held in Cairo, Egypt, Apr. 14 to 18. Dr. J. R. Parker, of the Bureau of Entomology and Plant Quarantine, in charge of the grasshopper research station at Bozeman, Mont., sailed Mar. 17 from New York to represent the United States.

HAVE YOUR FEEDS ANALYZED

Know That They Are Right

Protein, Fat and Fibre of Feeds and Grains Analyzed at Low Cost.

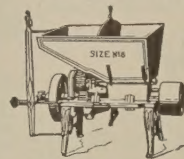
Runyon Testing Laboratories
1106 Board of Trade Bldg. Chicago, Ill.
RUNYON Certificates of Analysis help sell feeds

Send in Your Samples Now.

BOWSHER Crush Grind Feed Mills' Mix

Rapidly crush ear corn (with or without husk) and grind all the small grains; either separately or mixed—mixed as they are being ground—not before or after. This saves time and labor.

"COMBINATION" MILLS



Use the famous Cone-Shape burrs. Light Draft. Large Capacity. Solidly Built. Long Life. Special sizes for the milling trade. Sacking or Wagon Box Elevator. Circular on request.

THE N. P. BOWSHER CO.
SOUTH BEND INDIANA

Poultry Production

by Lippincott and Card

(5th Edition—Revised)

Every elevator that grinds and mixes poultry feeds needs this new, quick-reference volume, devoted to practical management of poultry enterprises. Prepared by noted authorities, it includes 238 illustrations. Considers culling, prevention and cure of diseases, incubation, brooding, housing, ventilation, etc., and gives 63 pages to selection and compounding of feeds, to feeding methods and the nutrient requirements of poultry.

Bound in cloth, 723 pages, fully cross indexed. Weight 4 lbs. Price, \$4.00, plus postage.

Grain & Feed Journals
Consolidated

332 S. La Salle St. Chicago, Ill.

Feed for Broilers

By ROY H. WAITE, Poultry Husbandman,
Maryland Exp. Station

Feeding is very important in broiler raising, not only to keep the birds in health, but to promote rapid and efficient growth and make the enterprise profitable. Rapid growth results in economical production. Labor, fuel, and feed costs are kept at a minimum, and a more rapid turnover is possible.

The most popular method of feeding broilers is the all-mash system where the feed is kept before the birds at all times. This system is a little easier to manage than where intermittent feeding is practiced, although the latter will give better results in the hands of an expert feeder.

A good ration contains the essential feed elements in an economical form. As much of cheap ingredients as possible should always be used. A simple broiler ration can be made up as follows:

	Lbs.
Wheat bran	300
Wheat middlings	300
Yellow corn meal	600
Ground oats	280
Alfalfa leaf meal	100
Meat scrap (50% protein)	200
Fish scrap	100
Dried skimmed milk	100
Cod liver oil	10
Salt	10
Total	2000

An Adjustable Broiler Ration.—During the last spring and summer of 1935, a feeding test was conducted to try out a special broiler ration devised by the writer with the idea of facilitating adjustment to the needs of the chicks as they grow and develop. The ration consists of three mixtures, all of ingredients commonly used in broiler raising. The formulas for these mixtures are given in Table II.

Table II—Broiler Ration
Starting Ration

	Lbs.
Ground yellow corn	530
Wheat bran	300
Wheat middlings	300
Feeding oat meal	300
Alfalfa leaf meal	100
Meat scrap (50% protein)	200
Fish meal	100
Dried skimmed milk or buttermilk	100
Cod liver oil	10
Feeding salt	10
Total	2000

Cutting Mixture

	Lbs.
Ground yellow corn	1180
Wheat bran	300
Wheat middlings	400
Alfalfa leaf meal	100
Cod liver oil	10
Feeding salt	10
Total	2000

Fattening Supplement

	Lbs.
Feeding oat meal	600
Wheat middlings	400
Ground yellow corn	480
Dried milk or buttermilk	500
Salt	20
Total	2000

Table III illustrates how the three mixtures were blended during the experiment, and Table IV shows the changes made in the formulas as a result of the blending. It will be readily seen that many other combinations can be made by using varying amounts of the three mixtures. Ground, freshly dried blue grass which has practically the same chemical composition, was used in place of the alfalfa leaf meal in the early part of the experiment, and varying percentages of ground limestone (from 0 to 4 per cent) were used in the different lots. As no significant differences were observed in the growth or the condition of the birds, as a result of the limestone additions, this ingredient is not included in the formula. No grit was provided in this test.

Thirty-five White Leghorn chicks, hatched April 30, 1935, were used in the test. They

Table III—Schedule of Blending to Suit Age of Chicks

Week	Starting Ration Lbs.	Cutting Mixture Lbs.	Fattening Supplement Lbs.
1	100	0	0
2	100	0	0
3	80	20	0
4	80	20	0
5	60	40	0
6	60	40	0
7	50	50	0
8	50	50	0
9	0	50	50
10	0	50	50

were brooded in the six small compartments (each 15 in. by 19.5 in. by 10 in. high) of a battery brooder, with wire floors constructed especially for laboratory use (Fig. 7). Electric heat was provided by one 350 ohm, 0.41 amps. resistance unit in each brooder. The chicks were weighed weekly and an account of all feed consumed was carefully kept. Rate of growth and feed consumption are shown in Table V.

Table IV—Formulas as Changed by Blending

	100 Starting 0 Cutting 0 Fattening	80 Start. 20 Cut. 0 Fat.	60 Start. 40 Cut. 0 Fat.	50 Start. 50 Cut. 0 Fat.	0 Start. 50 Cut. 50 Fat.
	Lbs.	Lbs.	Lbs.	Lbs.	Lbs.
Bran	300	300	300	300	150
Middlings	300	320	340	350	400
Ground corn	580	700	820	880	880
Oat meal	300	240	180	150	300
Meat scrap	200	160	120	100	...
Fish meal	100	80	60	50	...
Dried milk	100	80	60	50	200
Leaf meal	100	100	100	100	50
Cod liver oil	10	10	10	10	5
Salt	10	10	10	10	15
Total	2000	2000	2000	2000	2000

It is hoped that additional tests may be run to try out different adjustments of the formula, but the results of the present test seemed so promising that it was thought advisable to give poultrymen the benefit of the experience.

Table V—Rate of Growth and Feed Consumption of Thirty-five Leghorn Chicks Grown in Close Confinement

(Figures on a per chick basis)

Age Weeks	Weight per Chick	Feed Consumed During Week	Feed per Pound of Gain for Week	Total Feed to Age Indicated
0	0.077	1.01	1.825	1.01
1	0.134	2.18	2.309	3.19
2	0.229	3.40	2.540	658
3	0.362	4.47	2.601	1.106
4	0.534	5.91	3.461	1.697
5	0.705	6.85	3.294	2.382
6	0.913	7.81	4.585	3.063
7	1.062	8.00	3.553	3.863
8	1.287	8.06	3.984	4.669
9	1.489	7.85	4.361	5.454
10	1.669			

Fattening Broilers.—The addition of corn products and milk transforms an ordinary ration into a fattening mixture. Flour wheat middlings, and refined oat products, also stand in high favor as ingredients for fattening rations. The mixture may be fed dry, or if rapid fattening is desired a wet mixture may be used. Wet mash feeding requires greater feeding skill, there being a tendency for the birds to overeat. The appetite must be kept on edge, otherwise the object of the heavy feeding will be defeated. A special fattening mixture can be made up by mixing the ingredients indicated in the last column of table IV. One must use caution in fattening birds that are to be shipped long distances, for it is difficult to ship overfat birds without serious shrinkage.

Heavy cod liver oil feeding sometimes results in a fishy taint to the flesh. It is well to eliminate this material entirely, or reduce it to a minimum during the last two weeks of feeding, before marketing. In the adjustable ration herein described, cod liver oil is cut to one-quarter of one per cent, when the fattening mixture is used.

The 1935 cash farm income for Kansas was \$265,371,000, compared with \$248,720,000 in 1934 and \$175,863,000 in 1933, according to the U. S. Department of Agriculture.

Grain Contracts with Farmers

Form 10 D. C. is recognized as the best for contracting grain and seed from farmers, and is in extensive use by grain dealers. Do not take chances with verbal contracts. They lead to misunderstandings, differences and disputes, as well as loss of profits and customers. Contract certifies that farmer:

"has sold.....bushels of.....at..... cents per bushel, to grade No....., to be delivered at.....on or before....." It also certifies that, "if inferior grain is delivered, the market difference at which such grain is selling on day of delivery shall be deducted. Any extension of time at buyer's option."

Originals are printed on bond paper, machine perforated so they may be easily removed; duplicates are of manila. All have spaces ruled on the back for recording each load delivered on the contract. Check bound, size 5½x8½ inches, 100 sets numbered in duplicate and supplied with 4 sheets of carbon paper. Order Form 10 DC Improved. Price \$1.10, f. o. b. Chicago. Wt. 1 lb.

Triplicating book is same as 10 DC and contains 100 additional copies of the contract printed on strong tissue and 4 sheets of dual faced carbon. Order Form 10 TC. Price \$1.35, f. o. b. Chicago. Weight, 21 ozs.

Grain & Feed Journals

Consolidated

332 So. La Salle St. Chicago, Ill.

Truck Loads to Bushels

Direct Reduction Grain Tables on cards reduce any weight from 600 to 12,090 lbs. to bushels of 32, 48, 56, 60, 70 and 75 lbs. by 10-pound breaks. Just the thing for truck loads.

Printed from large clear type on both sides of six cards, size 10¾ x 12¾ inches with marginal index, weight 1 lb. Price, \$1.25, plus postage. Order 3275Ex.

Grain & Feed Journals

CONSOLIDATED

332 So. La Salle Street
Chicago, Ill.

Grease Lubrication

Grease cup oiling is as old as grease. The familiar type of compression cup with a screw-down cover is still used in many applications, but modern methods find little need for this hand-screw cup. Other types have proven themselves to be far better. Illustrated and described herewith are various types of up-to-date grease cups particularly adaptable to the various bearings found in elevators and mills. They have been used and proven beyond question. A large number of elevator superintendents are using them at present.

The device illustrated in Fig. 10 is the



Fig. 10. Venango Cup.

gravity feed Venango Cup which is intended for general purpose application on practically all horizontal bearings of the flat or sleeve type. It can be used on ring or chain oiling bearings by first removing the ring or chain, and is giving excellent results on bearings of this type in many installations. The grease is fed by the combined action of gravity, of the agitation of a short copper rod which rides on the shaft, and of the slight suction produced by the action of the grease in the rotating shaft. These cups have been found to provide efficient lubrication for periods of from one month to more than a year at a single filling and they provide this lubrication without wasting grease on the outside of the bearing or on the floor. These cups are simple and contain nothing to get out of order and are quite inexpensive. Their sizes and capacities are as follows:

No.	Size of Shank	Capacity	Diameter	Height
00	1/8" - 1/4"	3/4 oz.	1 1/4"	2 1/8"
0	1/8" - 3/8"	1 1/2 oz.	1 3/8"	2 3/8"
1	3/8" - 1/2"	3 oz.	2 1/8"	3 1/8"
2	1/2" - 3/4"	4 1/2 oz.	2 3/4"	4"

Fig. 11 shows the Organ Type C Automatic Grease Cup which is very similar in design to the Organ Type A Spring Automatic Cup as shown in Fig. 12. The real difference in these two cups is that the Type C cup is provided with a pressure gun fitting in the top for convenience in filling, while the Type A cup is

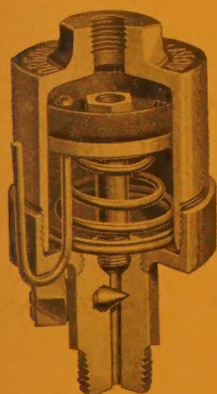


Fig. 11. Organ Type C Cup.

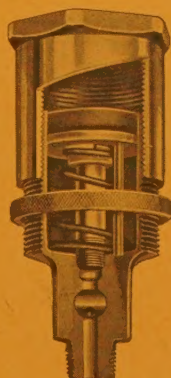


Fig. 12. Organ Type A Cup.

filled by removing the cap and then re-screwing it by hand. Both of these cups are very rugged grease. Both are fitted with an indicator which in their construction and have a feed adjustment for supplying exactly the right amount of shows at a glance the amount of grease remaining in the cup. A locknut is provided to prevent the cap from becoming loosened by vibration. These cups will provide automatic and continuous lubrication to bearings which are difficult to lubricate by ordinary means and which are frequent causes of trouble and of fires. They are particularly adapted to the lubrication of moving or oscillating bearings, such as bolter and sifter bearings and eccentric bearings on cleaners and purifiers. For a particular example, the main bearing on an Allis universal bolter is wonderfully well taken care of by this type of grease cup. Organ Type "A" cups are made in the following sizes:

No.	Size of Shank	Capacity	Diameter	Height
0	1/8" - 1/4"	1 oz.	1 3/8"	2 7/8"
1	1/4" - 3/8"	1 1/2 oz.	2"	3 3/8"
2	3/8" - 1/2"	3 oz.	2 1/8"	4 1/8"
3	1/2" - 3/4"	4 1/2 oz.	2 3/4"	4 7/8"

Organ Type "C" cups are made in following sizes:

No.	Size of Shank	Capacity	Inlet Diameter	Height
00	1/8" - 1/4"	1/4 oz.	1/8" - 1/4"	1 1/8" - 2 7/8"
0	1/4" - 3/8"	3/4 oz.	1/4" - 3/8"	1 3/8" - 3 3/8"
1	3/8" - 1/2"	1 1/2 oz.	3/8" - 1/2"	2 1/8" - 4"
2	1/2" - 3/4"	2 1/2 oz.	1/2" - 3/4"	2 3/4" - 4 5/8"

Fig. 13 shows the Organ Loose Pulley Grease Cup which is very similar in design to the Types A and C cups except that the grease is fed to the bearing by centrifugal force. This cup is designed particularly for loose pulleys which must be lubricated thru the pulley hub. Since it operates by centrifugal force, grease is fed to the bearing only when the pulley is turning. A feed adjustment is provided for supplying exactly the right amount of grease at the normal rate of rotation of the pulley and is set to function effectively on any pulley turning at 50 r.p.m. or more.

Their sizes and capacities are as follows:

No.	Size of Shank	Capacity	Diameter	Height
0	1/8" - 1/4"	1/2 oz.	1 3/8"	1 3/4"
1	1/4" - 3/8"	1 oz.	1 3/8"	2 3/8"
2	3/8" - 1/2"	2 oz.	2 1/8"	2 3/4"

Trucking Grain 65 Miles for 6 Cents

The Indiana Farm Bureau has no sympathy with the railroads or overpaid railroad labor, so it is advertising that it will transport grain from farmers in the vicinity of Rolling Prairie, Ind., to Chicago by truck and pay 6 cents under what grain brings at Chicago.

It seems that the Bureau sells a large volume of feeds and fertilizers to farmers, for which it hires trucks from Chicago, and with a view to obtaining transportation of these commodities at a lower rate, it is striving to get a pay load for the truckers both ways.

The railroad's charge is 13 1/2 cents per hundredweight for this 65 mile haul, while the Bureau offers to transport grain for 6 cents per bushel.

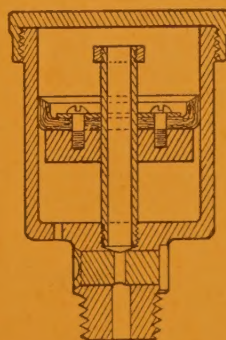


Fig. 13. Organ Loose Pulley Cup.

Confirmation Blanks

Simple - Complete - Safe

If you would avoid trade disputes and differences, and prevent expensive errors, use triplicating confirmation blanks. You retain tissue copy, sign and send original and duplicate to customer. He signs and returns one and retains the other.

This places the entire burden for any misunderstanding of your intentions upon the other party and protects you against the expensive misinterpretation of your trades.

The use of these confirmations makes for safer business. Spaces are provided for recording all essential conditions of each trade.

Fifty confirmations in triplicate, bound with pressboard and wire stitched, size 5 1/2 x 8". Order Form No. 6 CB. Weight, 9 oz. Price 75c; three copies \$2.00, plus postage.

Grain & Feed Journals

CONSOLIDATED

332 South La Salle St., Chicago, Ill.

Shippers' Certificate of Weight

for use in advising receivers of the amount and grade of grain loaded into a car. Especially adapted for filing claims for Loss of Weight in Transit. Each certificate gives: "Kind of scale used; Station; Car Number and Initials; Shipper's Name;—lbs. equal to—bus. of No. —; Date scales were tested and by whom; car thoroughly examined and found to be in good condition and properly sealed when delivered to the ————R. R. Co.; Seal Record, name and number, sides and ends; marked capacity of car; date; name of the weigher." On back is a form for recording the weight of each draught.

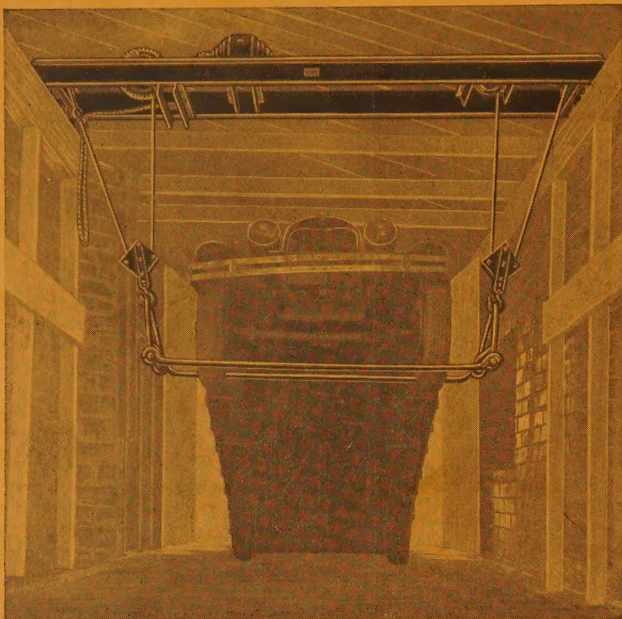
Printed and numbered in duplicate. Originals on Goldenrod Bond; duplicates on tough pink manila in two colors of ink. Well bound with heavy hinged pressboard covers. 75 originals, 75 duplicates and four sheets of carbon paper. Size 4 1/4 x 4 3/4 inches. Weight 11 ozs.

Order No. 89 SWC.
Price \$1.00, plus postage

Grain & Feed Journals

CONSOLIDATED

332 So. La Salle St., Chicago



American Electric Truck Lift

For long and short trucks. Wide, heavy construction. No binding. Positive locking gear. Easy installation.

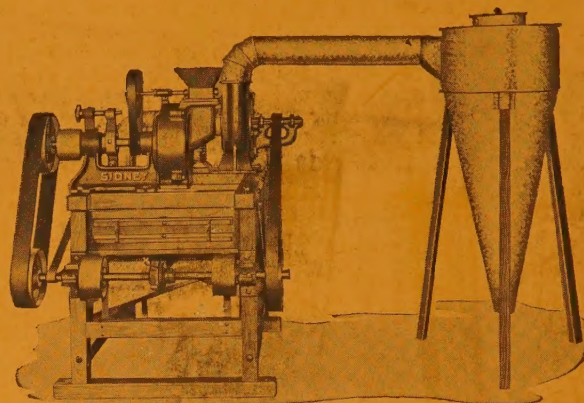
Complete stock of elevator machinery including

Heads	Boots	Pulleys	Head Drives
Spouting	Buckets	Rope	Howe Scales

Write for catalog and prices.

AMERICAN MACHINERY & SUPPLY CO., Omaha, Nebraska

SIDNEY Improved Corn Cracker



Every custom grinder and mixer of feed can materially increase his business if his plant is equipped with an efficient corn cracker and grader. It is easy to build up a demand for its product. The Sidney Corn Cracker and Grader is the latest advance in this type of equipment. Ask us for detailed information.

Sidney Grain Machinery Co.
SIDNEY, OHIO

Will You Build or Remodel?

your grain elevator or feed mill. Then of course you will want complete information relative to the latest, improved equipment, which is designed to facilitate and expedite the handling and grinding of grain.

Account Books
Attrition Mill
Bag Closing Machine
Bags and Burlap
Bearings { Roller
Belting { Ball
Bin Thermometer
Bin Valves
Bleachers and Purifiers
Boots
Buckets
Car Liners
Car-Loader
Car-Fuller
Car-Pusher
Car Seals
Cipher Codes
Claim (R. R.) Collection
Clovon Huller
Coal Conveyor

Concrete Restoration
Corn Cracker
Conveying Machinery
Distributor
Dockage Tester
Dump
Dust Collector
Dust Protector
Elevator Leg
Elevator Paint
Feed Formulas
Feed Ingredients
Feed Mixer { Dry
Feed Mill { Molasses
Fire Barrels
Fire Extinguishers
Foundation Restoration
Grain Cleaner
Grain Drier
Grain Tables

Hammer Mill
Head Drive
Leg Backstop
Lightning Rods
Loading Spout
Magnetic Separator
Manlift
Moisture Tester
Motor Control
Mustard Seed Separator
Oat Clipper
Oat Huller
Plans of Grain Elevators
Portable Elevator
Power { Oil Engine
Power { Motors
Power Shovel
Railroad Claim Books
Rope Drive
Safety Steel Sash
Sample Envelopes

Scales { Truck
Scales { Hopper
Scale Tickets { Automatic
Scale Tickets { Machine
Scarifying Machine
Screw Conveyor
Seed Treating { Machine
Separator { Chemicals
Sheller
Siding-Roofing { Asbestos
Siding-Roofing { Steel or Zinc
Silent Chain Drive
Speed Reduction Units
Spouting
Storage Tanks
Testing Apparatus
Transmission Machinery
Waterproofing (Cement)
Weevil Exterminator
Wheat Washer

Draw a line through the supplies wanted, and write us regarding your contemplated improvements or changes. We will place you in communication with reputable firms specializing in what you need, to the end that you will receive information regarding the latest and best.

INFORMATION BUREAU

Grain & Feed Journals Consolidated

332 S. La Salle St.

CHICAGO, ILL.